

Discontinued some variations
Sales of ETS-05 to ETS-12 discontinued

ETS

Servo motor compatible
electric actuator
Motorless specification

Slider type (ball screw drive)



CONTENTS

Product introduction	Intro
Series variation	86
● Specifications/How to order/Dimensions	
· ETS-05	90
· ETS-06	96
· ETS-10	102
· ETS-12	110
· ETS-13	118
· ETS-14	126
· ETS-17	134
· ETS-22	142
● Model selection	150
● Technical data	152
⚠ Safety precautions	686
Model Selection Check Sheet	708

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

EKS

ECS

EKS

ECS

EKS

ECS

Servo motor compatible

Stepper motor compatible

Safety
precautions

Discontinued some variations Sales of ETS-05 to ETS-12 discontinued

Series variation																
Type	Model No.		Applicable motor capacity (W)	Body width (mm)	Screw lead (mm)	Max. load capacity (kg)										
						Horizontal *2	Vertical	50	100	150	200	250	300	350	400	
Slider		ETS-05	100	51	2	10	7	100mm/s								
					5	10	3	250								
					10	5	1.5	500								
		ETS-06	50 *1	65	2	12	6	100								
					5	12	4	250								
					10	6	2	500								
			100		2	30	15	100								
					5	30	10	250								
					10	15	5	500								
		ETS-10	100	102	5	50	12	250								
					10	30	8	500								
			200		16	22	5	800								
					20	18	3	1000								
		ETS-12	100	102	5	50	12	250								
					10	30	8	500								
			200		16	22	5	800								
					20	18	3	1000								
		ETS-13	100 *1	135	5	50	12	250								
					10	30	8	500								
					16	22	5	800								
					20	18	3	1000								
			200		5	70	17	250								
					10	47	12	500								
					16	30	6	800								
					20	24	4	1000								
		ETS-14	200	135	5	95	27	250								
					10	75	18	500								
					16	44	7	800								
					20	35	6	1000								
			400		5	110	33	250								
					10	88	22	500								
					16	48	10	800								
					20	40	8	1000								
		ETS-17	400	170	5	120	40	250								
					10	110	30	500								
					20	75	14	1000								
					40	35	7	2000								
			750		5	120	50	250								
					10	120	40	500								
					20	83	25	1000								
					40	50	10	2000								
	ETS-22	750	220	5	150	55	250									
				10	150	45	500									
				25	120	20	1250									
				40	60	10	2000									

*1: ETS-06 50 W/ETS-13 100 W support only metal stopper (ETS-X) specifications.
*2: The load capacity when wall mounted is the same as for horizontal installation.

Sales of ETS-05 to ETS-12 terminated.

ETS Series

Series variation

Stroke length (mm) and max. speed (mm/s) *3																											Page	Servo motor compatible																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650 mm		EBS	EBR	ETS	ETSMulti-Axis	ECS	ETV	ECV	EKS	Stepper motor compatible																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
			90	80	70	60	13.53 sec.*4																									90																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

*3: The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

*4: shows the positioning time. Maximum stroke when installed horizontally and operated at max. speed and max. acceleration/deceleration. Note that this is not the value at maximum load capacity.

How to order

How to order

ETS - 06 - 05 040 - E M 1 N C B D P - M - X

A Body size *1	B Motor mounting direction *2 *3	C Stroke length	D Motor capacity *1	E Brake *2	F Origin sensor (1 pc) *4	G Positioning pin hole
05 Body width 51 mm	E Straight mounting	005 50 mm	0 50 W	N None	N None	N None
06 Body width 65 mm	B Built-in mounting	to (In 50 mm increments)	1 100 W	B Yes	A Inside motor side	P Yes
10 Body width 102 mm	R Right mounting	150 1500 mm	2 200 W		B Inside motor opposite side	
12 Body width 102 mm	D Bottom mounting		4 400 W		C Outside motor side (included at shipment)	
13 Body width 135 mm	L Left mounting		8 750 W		D Outside motor opposite side (included at shipment)	
14 Body width 135 mm						
17 Body width 170 mm						
22 Body width 220 mm						

B Screw lead	E Mounted motor specification	H Limit sensor (2 pcs) *4	I Grease nipple
02 2 mm	M	N None	N None (Body mounting direction: Standard)
05 5 mm	Y Refer to the list on the page at right	A Inside	D None (Body mounting direction: Bottom side)
10 10 mm		B Outside	R Right
16 16 mm			L Left
20 20 mm			
25 25 mm			
40 40 mm			

L Magnet slider method *5	M Metal stopper specifications (ETS-X) *1 *3
Standard	Standard
M Yes	X Yes

*1: ETS-06 50 W/ETS-13 100 W support only metal stopper specifications.

*2: Select "Yes" to the Brake only when the motor mounting direction is built-in mounting.

For other mounting directions, select "None."

*3: Built-in mounting cannot be selected with metal stopper specifications.

*4: The sensor dog is assembled at shipment regardless of sensor presence.

*5: ETS-05/06 uses the magnet slider method.

Other sizes use the standard.

Manufacturer	50 W	100 W	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M	M	M
Delta Electronics Co., Ltd.	M	M	M	M	M
Sanyo Denki Co., Ltd.	M	M	M	M	-
YASKAWA Electric Corporation	Y	Y	Y	Y	Y
Keyence Corporation	Y	Y	Y	Y	Y
Panasonic Corporation	P	P	P	P	P
OMRON Corporation	M	M	P	P	P
Fuji Electric Co., Ltd.	M	M	M	M	M
FANUC CORPORATION	F	F	F	F	F
DENSO WAVE Incorporated (ETS-X only)	-	M	M	M	-
Bosch Rexroth AG	P	P	P	P	P
Rockwell Automation, Inc.	M	M	M	M	M
SIEMENS AG	M	M	M	M	M

*50 W supports only ETS-06 metal stopper specifications.

Example of model No.

ETS-06-05040-EM1NCBDP-M-X

- A** Body size : 06 Series
B Screw lead : 5 mm
C Stroke length : 400 mm
D Motor mounting direction : Straight
E Mounted motor specification : M (refer to the table on the page at right)
F Motor capacity : 100 W
G Brake : None
H Origin sensor : External motor side
I Limit sensor : Outside
J Grease nipple : None (Body mounting method: Bottom side)
K Positioning pin hole : Yes
L Magnet slider method : Yes
M Metal stopper specifications (ETS-X) : Yes

*This product is composed of an actuator (and motor mounting parts) only; there is no motor attached.
The user must prepare, mount, and adjust the motor and driver.

Discontinued some variations

Sales of ETS-05 to ETS-12 terminated

ETS Series

List of servo motors recommended for mounting

List of servo motors recommended for mounting

Code	Manufacturer	Series	50 W *3 (ETS-06 Series)	100 W *3 *4 (ETS-05/06/10/12/13 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR053	HG-KR13
		MELSERVO J5	HG-KT053W	HK-KT13W
M	Delta Electronics Co., Ltd.	ECMA-C *2	ECMA-C1040F	ECMA-C10401
M	Sanyo Corporation, Ltd.	SANMOTION R	R2□A04005	R2□A04010
Y	YASKAWA Electric Corporation	Σ-V	SGMJV-A5	SGMJV-01
		Σ-7 *1	SGM7J-A5	SGM7J-01
Y	Keyence Corporation	SV	SV-□005	SV-□010
		SV2 *1	SV2-□005	SV2-□010
P	Panasonic Corporation	MINAS A5	MSMD5A	MSMD01
		MINAS A6 *1	MSMF5A	MSMF01
M	OMRON Corporation	G5	R88M-K0503	R88M-K10030
		1S *1	-	R88M-1M10030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS500D7-□B2□	GYS101D7-□B2□
		ALPHA7 GYB	-	-
F	FANUC CORPORATION *1	βiS-B	A06B-0111-B1	A06B-0112-B1
M	DENSO WAVE Incorporated	410627	-	410627-121□
			-	410627-122□
P	Bosch Rexroth AG	MSM	MSM019A	MSM019B
M	Rockwell Automation, Inc. *1	TLP	TLP-A046-005-DKA□2	TLP-A046-010-DKA□2
M	SIEMENS AG *1	1FK2 *7	1FK2102-0AG0	1FK2102-1AG0

Code	Manufacturer	Series	200 W *4 *5 (ETS-10/12/13/14 Series)	400 W (ETS-13/14/17 Series)	750 W *6 (ETS-17/22 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT23W	HK-KT43W	HK-KT7M3W
M	Delta Electronics Co., Ltd.	ECMA-C *2	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Corporation, Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	YASKAWA Electric Corporation	Σ-V	SGMJV-02	SGMJV-04	SGMJV-08
		Σ-7 *1	SGM7J-02	SGM7J-04	SGM7J-08
Y	Keyence Corporation	SV	SV-□020	SV-□040	SV-□075
		SV2 *1	SV2-□020	SV2-□040	SV2-□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
		MINAS A6 *1	MSMF02	MSMF04	MSMF08
P	OMRON Corporation	G5	R88M-K20030	R88M-K40030	R88M-K75030
		1S *1	R88M-1M20030	R88M-1M40030	R88M-1M75030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS201D7-□B2□	GYS401D7-□B2□	GYS751D7-□B2□
		ALPHA7 GYB	GYB201D7-□B2□	GYB401D7-□B2□	GYB751D7-□B2□
F	FANUC CORPORATION *1	βiS-B	A06B-2115-B1	A06B-2116-B1	A06B-2063-B1
M	DENSO WAVE Incorporated	410627	410627-125□	410627-127□	-
			410627-126□	410627-128□	-
P	Bosch Rexroth AG	MSM	MSM031B	MSM031C	MSM041B
M	Rockwell Automation, Inc. *1	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2	TLP-A090-075-DKA□2
M	SIEMENS AG *1	1FK2 *7	1FK2203-2AG0	1FK2203-4AG0	1FK2204-5AK0

* Contact CKD for mounting other than the above motors and products of other motor manufacturers.

*1: Cannot be used with built-in mounting.

*2: ECMA series (with brake) cannot be used with built-in mounting.

*3: ETS-06 50 W and ETS-13 100 W are available with metal stopper specifications only; built-in mounting cannot be selected.

*4: Contact CKD when using an OMRON motor with ETS-12 built-in mounting.

*5: ETS-10 and 12 200 W cannot be used with built-in mounting.

*6: ETS-17 750 W cannot be used with built-in mounting.

*7: The servo motor is subject to the regulations of Export Trade Control Order Appendix Table 1 Item 7 (8), and is applicable with regard to its specifications. (as of January 2021)

Servo motor compatible

Stepper motor compatible

Safety precautions

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS-13 Series

Straight motor mounting, built-in mounting

- Servo motor capacity: 100 W (metal stopper specifications)/200 W/400 W

How to order

ETS	-	13	-	05	-	005	-	E	M	1	N	N	N	N	N	X	
		A			B			C			D			E			F
		A Body size		C Stroke length		E Mounted motor specification		H Origin sensor (1 pc) *4 *5 *6		L Metal stopper specifications (ETS-X) *1 *2				K Positioning pin hole			
		13 Body width 135 mm		005 50 mm to 105 1050 mm (In 50 mm increments)		M Select the mounted motor Y specification from the table below. P F		N None A Inside motor side B Inside motor opposite side C Outside motor side D Outside motor opposite side		Standard X Yes				N None P Yes			
		B Screw lead		D Motor mounting direction *1 *3		F Motor capacity *2		I Limit sensor (2 pcs) *4 *5 *6		J Grease nipple *6 *7							
		05 5 mm 10 10 mm 16 16 mm 20 20 mm		E Straight mounting B Built-in mounting		1 100 W 2 200 W 4 400 W		N None A Inside B Outside		N None (Body mounting direction: Standard) R Right L Left							
						G Brake *3											
						N None B Yes											

Manufacturer	100 W	200 W	400 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics Co., Ltd.	M	M	M
Sanyo Denki Co., Ltd.	M	M	M
YASKAWA Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	M	P	P
Fuji Electric Co., Ltd.	M	M	M
FANUC CORPORATION	F	F	F
DENSO WAVE Incorporated (ETS-X only)	M	M	M
Bosch Rexroth AG	P	P	P
Rockwell Automation, Inc.	M	M	M
SIEMENS AG	M	M	M

*100 W supports only metal stopper specifications.

*Refer to page 89 for the motor model No.

*1: Built-in mounting cannot be selected with metal stopper specifications.

*2: 100 W can be selected only when selecting metal stopper specifications.

*3: "Yes" to the Brake can be selected only when the motor mounting direction is built-in mounting.

*4: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*5: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)

For sensor outside mounting, the user can adjust the position. (Included at shipment)

*6: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.

*7: "Body mounting direction: Standard" here indicates that either top or bottom mounting is possible.

Specifications

Applicable motor capacity *1			100 W/200 W/400 W servo motor			
Drive method			Ball screw ø16			
Ball screw accuracy grade			C7			
Stroke length mm			50 to 1050			
Screw lead mm			5	10	16	20
Max. load capacity *1 *2	Horizontal kg	100 W	50	30	22	18
		200 W	70	47	30	24
		400 W	70	47	30	24
	Vertical kg	100 W	12	8	5	3
		200 W	17	12	6	4
		400 W	17	12	6	4
Max. speed mm/s		250	500	800	1000	
Rated thrust *1 *2	100 W N	341	170	106	85	
	200 W N	683	341	213	174	
	400 W N	1388	694	433	347	
Repeatability mm		±0.01				
Lost motion mm		0.1 or less				
Dynamic allowable load N		4822				
Static allowable moment N·m		MP: 175, MY: 174, MR: 153				
Dynamic allowable moment N·m		MP: 45.1, MY: 45.1, MR: 191.7				
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)				
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)				
Atmosphere		No corrosive gas, explosive gas, or dust				

*1 100 W can be selected only with metal stopper (ETS-X) specifications.

*2 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

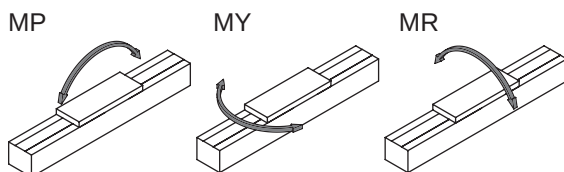
		(mm/s)					
Screw lead	Stroke length	100 to 750	800	850	900	950	1050
5		250	225	200	175	150	125
10		500	450	400	350	300	250
16		800	720	640	560	480	400
20		1000	900	800	700	600	500

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable overhang length

*Refer to page 152 for details.

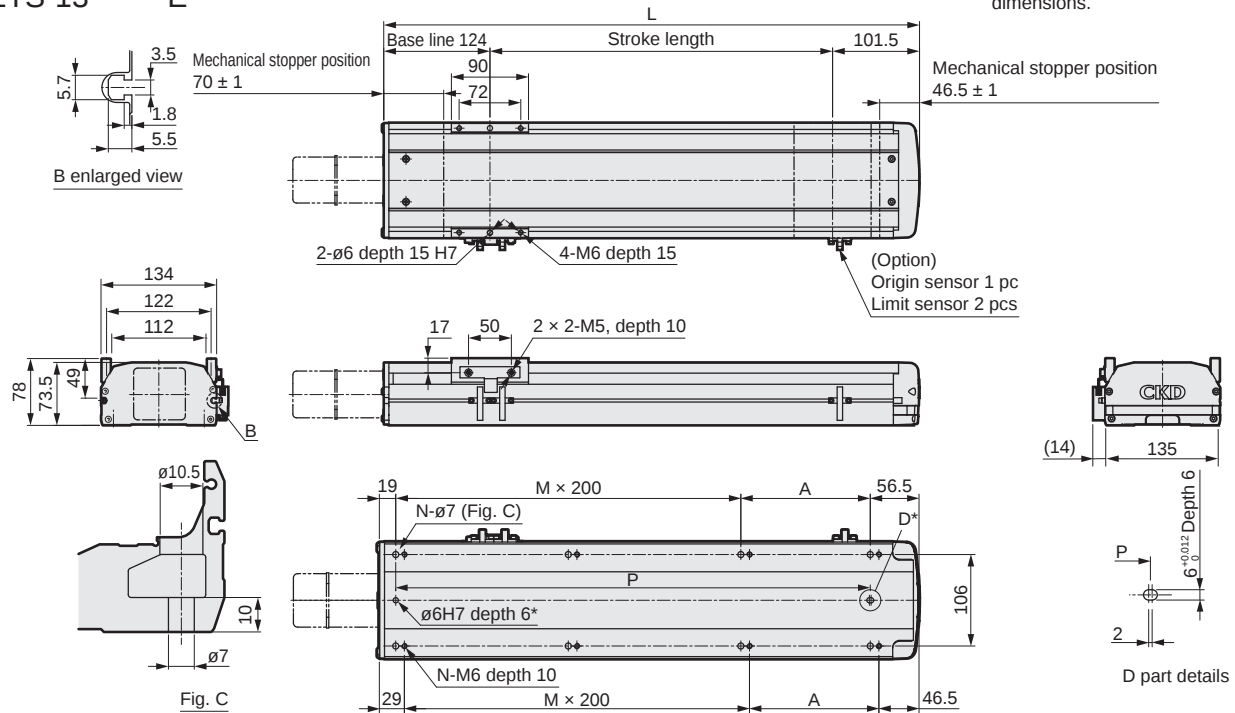
Moment direction



Dimensions Straight motor mounting

● ETS-13-****-E

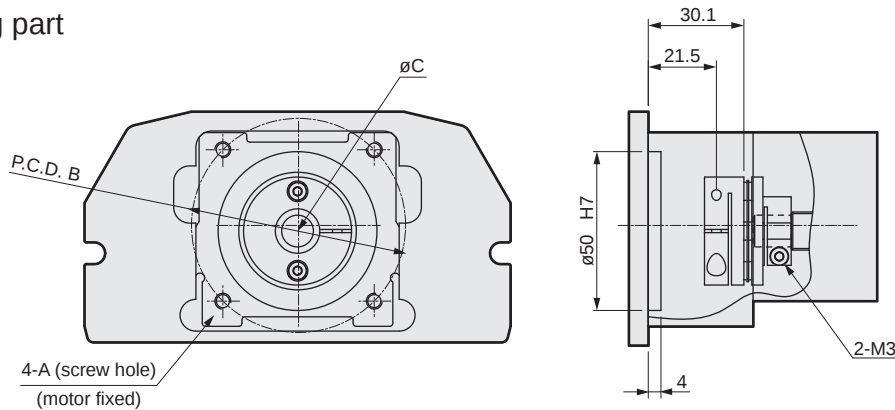
· Refer to page 158 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	5.9	6.5	6.9	7.4	7.9	8.4	8.9	9.3	9.9	10.3	10.9	11.3	11.8	12.3	12.8	13.3	13.8	14.3	14.8	15.2	15.8

Motor mounting part



Mounted motor specification	A	B	C	Motor mounting bolt
M 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L20
Y 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L20
P 100 W/200 W/400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 × L18/4-M4 × L20
F 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø9/ø14	4-M5 × L18/4-M5 × L20 4-M5 × L20

*100 W supports only metal stopper specifications.

List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor capacity	Motor mounting bolt
			Size Quantity
M	Assembled at shipment	100 W/ 200 W/ 400 W	M4/M5/M5 2/4/4
Y			M4/M5/M5 2/4/4
P			M3/M4/M4 4/4/4
F			M4/M5/M5 2/4/4

*100 W supports only metal stopper specifications.

[Origin sensor/Limit sensor]

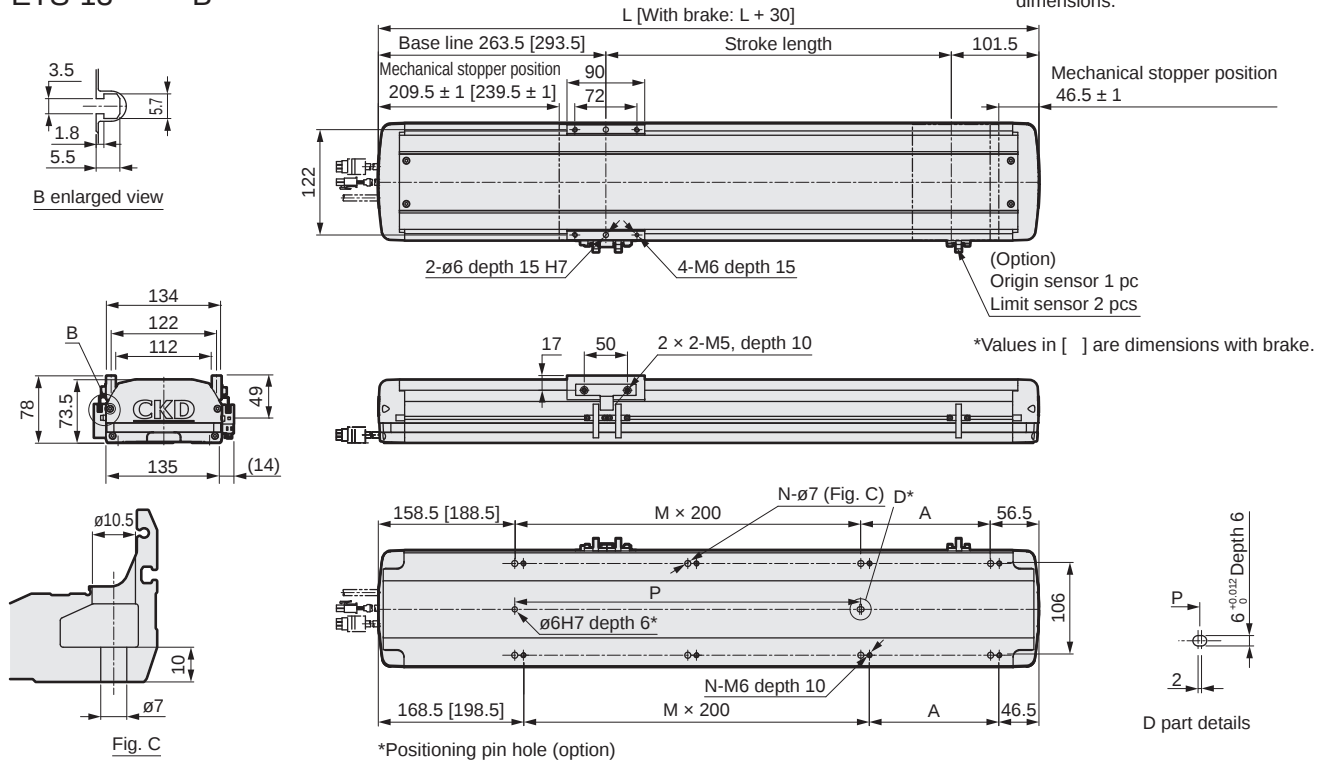
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

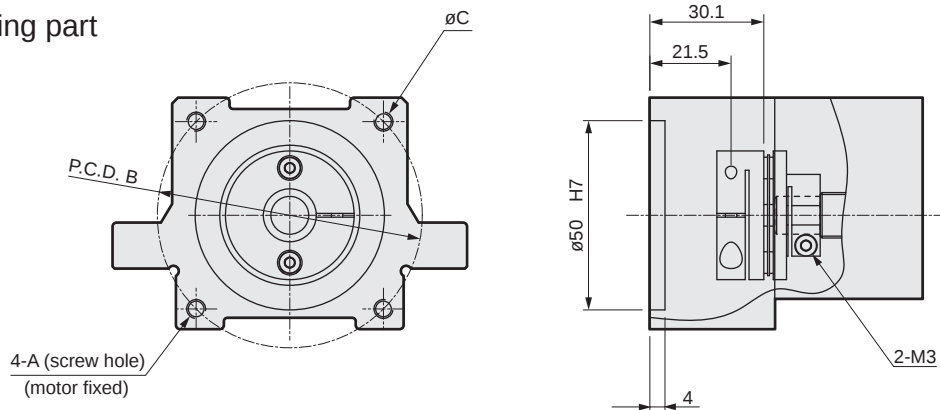
Dimensions Motor built-in mounting

● ETS-13-*****-B

Refer to page 158 for grease nipple dimensions.



Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M	100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L20
Y	100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L20
P	100 W/200 W/400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 × L18/4-M4 × L20

*100 W supports only metal stopper specifications.

List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Assembled at shipment	100 W/ 200 W/ 400 W	M4/M5/M5	2/4/4
Y			M4/M5/M5	2/4/4
P			M3/M4/M4	4/4/4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Discontinued some variations

ETS-13 Series

Dimensions/List of attachments

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS-13 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 100 W (metal stopper specifications)/200 W/400 W



How to order

ETS	- 13	- 05	005	- R	M	1	N	N	N	N	N	X
A	B	C	D	E	F	G	H	I	J	K	L	
A Body size	B Screw lead	C Stroke length	D Motor mounting direction *6	E Mounted motor specification	F Motor capacity *1	G Brake	H Origin sensor (1 pc) *2 *3 *4	I Limit sensor (2 pcs) *2 *3 *4	J Grease nipple *4 *5 *6	K Positioning pin hole	L Metal stopper specifications (ETS-X) *1	
13 Body width 135 mm	05 5 mm 10 10 mm 16 16 mm 20 20 mm	005 50 mm to 105 (In 50 mm increments) 1050 mm	R Right mounting D Bottom mounting L Left mounting	M Select the mounted motor Y specification from the table below. P specification from the table below. F	1 100 W 2 200 W 4 400 W	N None A Inside B Outside	N None A Inside B Outside	N None A Inside B Outside	N None (Body mounting direction: Standard) R Right L Left	N None P Yes	Standard X Yes	

Manufacturer	100 W	200 W	400 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics Co., Ltd.	M	M	M
Sanyo Denki Co., Ltd.	M	M	M
YASKAWA Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	M	P	P
Fuji Electric Co., Ltd.	M	M	M
FANUC CORPORATION	F	F	F
DENSO WAVE Incorporated (ETS-X only)	M	M	M
Bosch Rexroth AG	P	P	P
Rockwell Automation, Inc.	M	M	M
SIEMENS AG	M	M	M

*Refer to page 89 for the motor model No.

*1: 100 W can be selected only when selecting metal stopper specifications.

*2: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*3: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)

For sensor outside mounting, the user can adjust the position. (Included at shipment)

*4: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.

*5: "Body mounting direction: Standard" here indicates that either top or bottom mounting is possible.

*6: When selecting motor mounting direction R, grease nipple R cannot be selected.

When selecting L, grease nipple L cannot be selected.

Specifications

Applicable motor capacity *1			100 W/200 W/400 W servo motor			
Drive method			Ball screw ø16			
Ball screw accuracy grade			C7			
Stroke length mm			50 to 1050			
Screw lead mm			5	10	16	20
Max. load capacity *1 *2	Horizontal kg	100 W	50	30	22	18
		200 W	70	47	30	24
		400 W	70	47	30	24
	Vertical kg	100 W	12	8	5	3
		200 W	17	12	6	4
		400 W	17	12	6	4
Max. speed mm/s			250	500	800	1000
Rated thrust *1*2	100 W	N	341	170	106	85
	200 W	N	683	341	213	174
	400 W	N	1388	694	433	347
Repeatability mm			±0.01			
Lost motion mm			0.1 or less			
Dynamic allowable load N			4822			
Static allowable moment N·m			MP: 175, MY: 174, MR: 153			
Dynamic allowable moment N·m			MP: 45.1, MY: 45.1, MR: 191.7			
Operating ambient temperature, humidity			0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage ambient temperature, humidity			-10 to 50°C (no freezing) 35 to 80% RH (no condensation)			
Atmosphere			No corrosive gas, explosive gas, or dust			

*1 100 W can be selected only with metal stopper (ETS-X) specifications.

*2 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

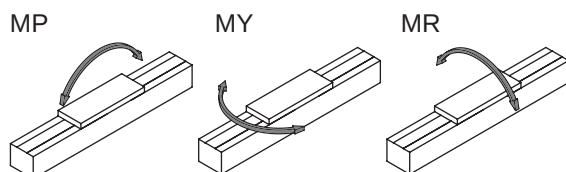
		(mm/s)					
Screw lead	Stroke length	100 to 750	800	850	900	950	1050
5		250	225	200	175	150	125
10		500	450	400	350	300	250
16		800	720	640	560	480	400
20		1000	900	800	700	600	500

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable overhang length

*Refer to page 152 for details.

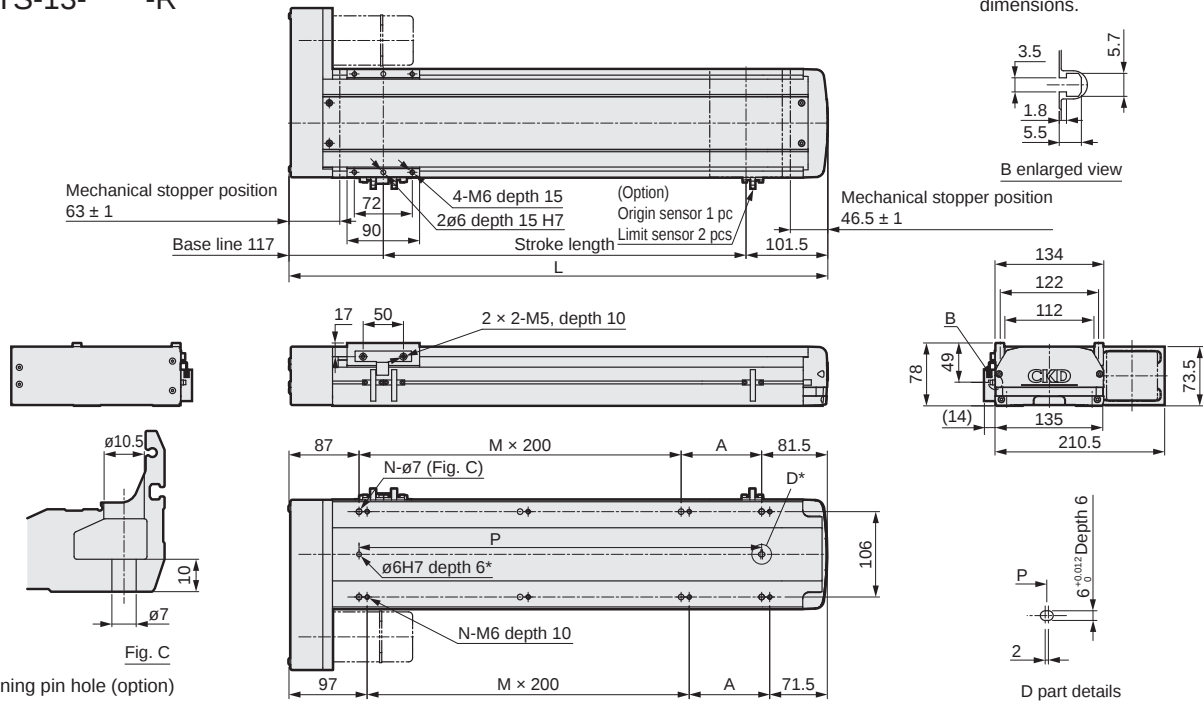
Moment direction



Dimensions Motor right-side mounting

● ETS-13-****-R

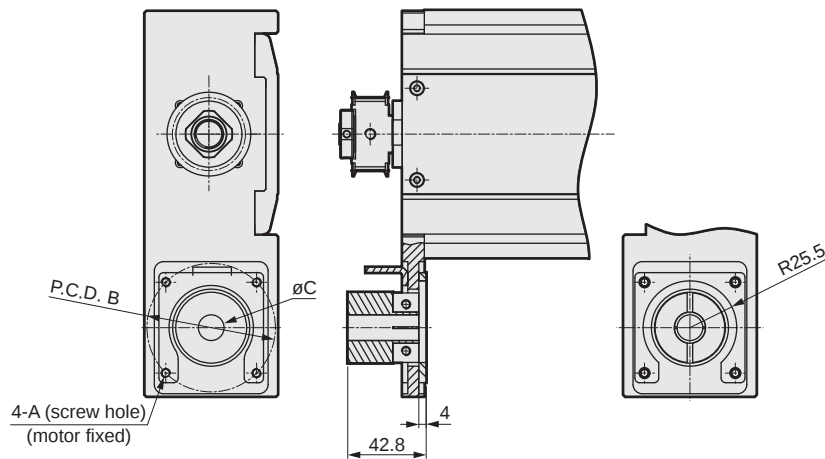
Refer to page 158 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5
N	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight (kg)	6.7	7.3	7.7	8.2	8.7	9.2	9.7	10.1	10.7	11.1	11.7	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.0	16.6

Motor mounting part



Mounted motor specification	A	B	C	Motor mounting bolt
M 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L25
Y 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L25
P 100 W/200 W/400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 × L18/4-M4 × L25
F 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø9/ø14	4-M5 × L18/4-M5 × L25 4-M5 × L18

*100 W supports only metal stopper specifications.

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt/pulley	Motor capacity	Motor mounting bolt
			Size Quantity
M	Included at shipment	100 W/ 200 W/ 400 W	M4/M5/M5 2/4/4
Y			M4/M5/M5 2/4/4
P			M3/M4/M4 4/4/4
F			M4/M5/M5 2/4/4

*100 W supports only metal stopper specifications.

[Origin sensor/Limit sensor]

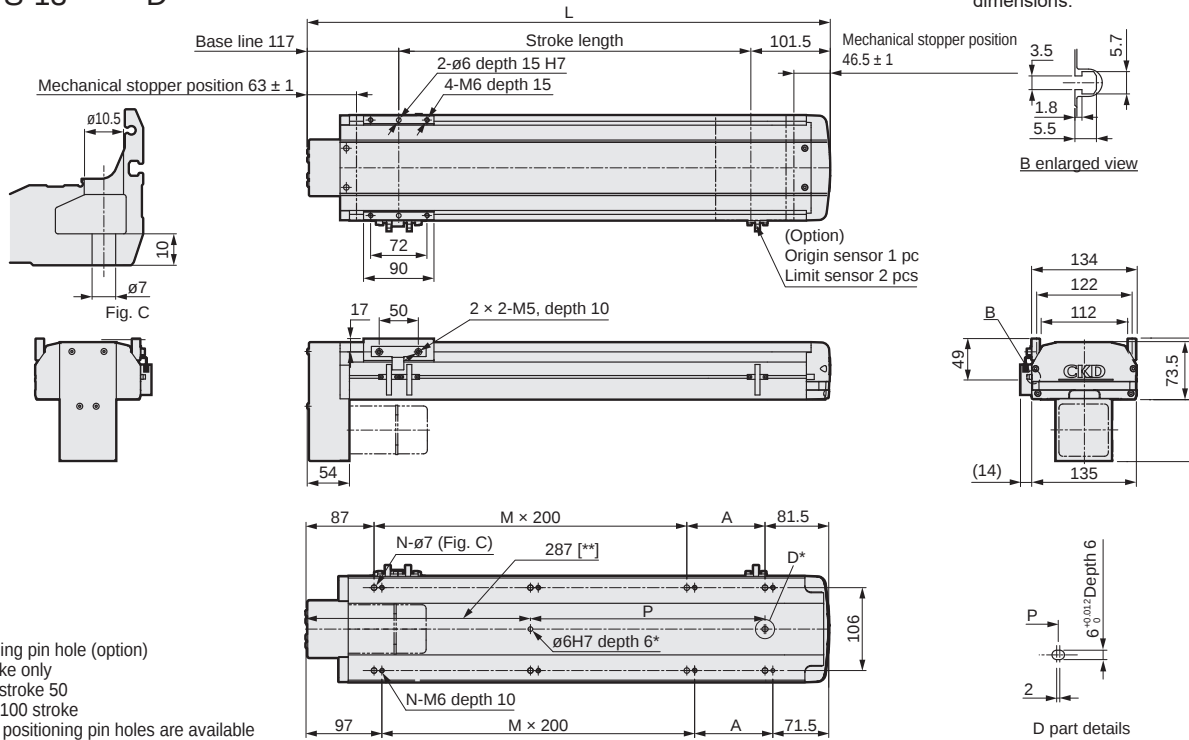
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Dimensions Motor bottom mounting

● ETS-13-*****-D

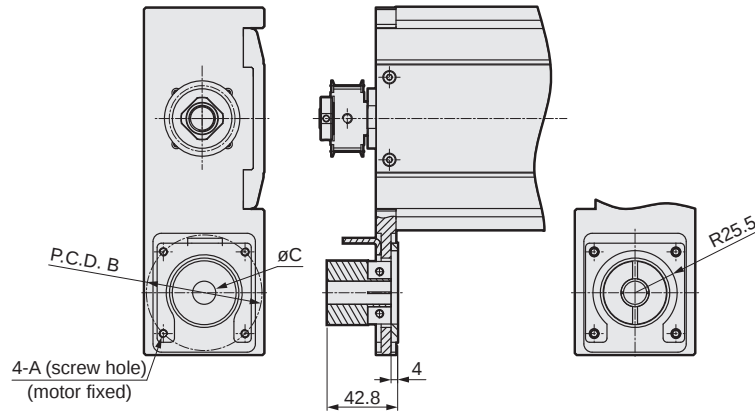
Refer to page 158 for grease nipple dimensions.



* Positioning pin hole (option)
** 50 stroke only
** 187 at stroke 50
237 at 100 stroke
Round positioning pin holes are available only for stroke 50, 100 and 150.

Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5
A	0	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5
N	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
P	0	0	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
Weight (kg)	6.7	7.3	7.7	8.2	8.7	9.2	9.7	10.1	10.7	11.1	11.7	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.0	16.6

Motor mounting part



Mounted motor specification	A	B	C	Motor mounting bolt
M 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L25
Y 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L25
P 100 W/200 W/400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 × L18/4-M4 × L25
F 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø9/ø14	4-M5 × L18/4-M5 × L25 4-M5 × L18

*100 W supports only metal stopper specifications.

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt/pulley	Motor capacity	Motor mounting bolt
			Size Quantity
M	Included at shipment	100 W/ 200 W/ 400 W	M4/M5/M5 2/4/4
Y			M4/M5/M5 2/4/4
P			M3/M4/M4 4/4/4
F			M4/M5/M5 2/4/4

*100 W supports only metal stopper specifications.

[Origin sensor/Limit sensor]

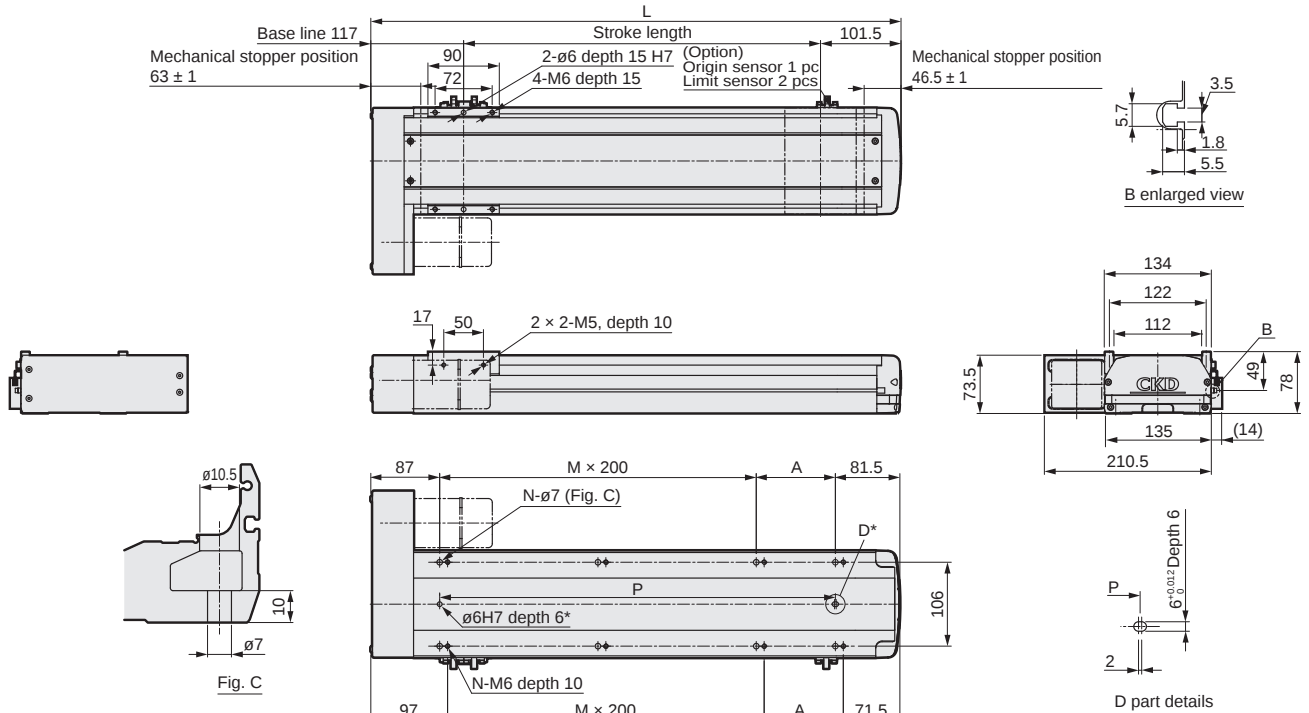
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Dimensions Motor left-side mounting

● ETS-13-*****-L

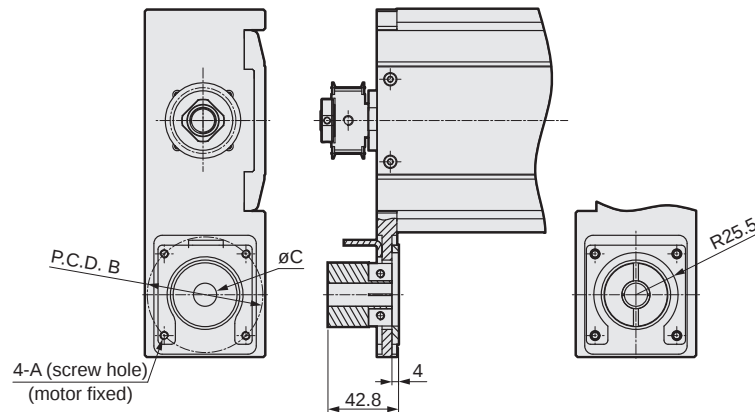
· Refer to page 158 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5
N	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight (kg)	6.7	7.3	7.7	8.2	8.7	9.2	9.7	10.1	10.7	11.1	11.7	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.0	16.6

Motor mounting part



Mounted motor specification	A	B	C	Motor mounting bolt
M 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L25
Y 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 × L18/4-M5 × L25
P 100 W/200 W/400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 × L18/4-M4 × L25
F 100 W/200 W/400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø9/ø14	4-M5 × L18/4-M5 × L25 4-M5 × L18

*100 W supports only metal stopper specifications.

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt/pulley	Motor capacity	Motor mounting bolt
			Size Quantity
M	Included at shipment	100 W/ 200 W/ 400 W	M4/M5/M5 2/4/4
Y			M4/M5/M5 2/4/4
P			M3/M4/M4 4/4/4
F			M4/M5/M5 2/4/4

*100 W supports only metal stopper specifications.

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS-14 Series

Straight motor mounting, built-in mounting

● Servo motor capacity: 200 W/400 W



How to order

Order code: ETS - 14 - 05 - 005 - E M 2 N N N N N - X

A Body size
14 Body width 135 mm

B Screw lead
05 5 mm
10 10 mm
16 16 mm
20 20 mm

C Stroke length
005 50 mm
to (In 50 mm increments)
105 1050 mm

D Motor mounting direction *1*2
E Straight mounting
B Built-in mounting

E Mounted motor specification
M Select the mounted motor specification from the table below.
Y
P
F

F Motor capacity
2 200 W
4 400 W

G Brake *2
N None
B Yes

H Origin sensor (1 pc) *3 *4 *5
N None
A Inside motor side
B Inside motor opposite side
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *3 *4 *5
N None
A Inside
B Outside

J Grease nipple *5 *6
N None (Body mounting direction: Standard)
R Right
L Left

K Positioning pin hole
N None
P Yes

L Metal stopper specifications (ETS-X) *1
Standard
X Yes

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics Co., Ltd.	M	M
Sanyo Denki Co., Ltd.	M	M
YASKAWA Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
DENSO WAVE Incorporated (ETS-X only)	M	M
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

*1: Built-in mounting cannot be selected with metal stopper specifications.

*2: "Yes" to the Brake can be selected only when the motor mounting direction is built-in mounting.

*3: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*4: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)

For sensor outside mounting, the user can adjust the position. (Included at shipment)

*5: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.

*6: "Body mounting direction: Standard" here indicates that either top or bottom mounting is possible.

*Refer to page 89 for the motor model No.

Specifications

Applicable motor capacity			200 W/400 W servo motor			
Drive method			Ball screw ø16			
Ball screw accuracy grade			C7			
Stroke length mm			50 to 1050			
Screw lead mm			5	10	16	20
Max. load capacity *1	Horizontal	200 W kg	95	75	44	35
		400 W kg	110	88	48	40
	Vertical	200 W kg	27	18	7	6
		400 W kg	33	22	10	8
Max. speed mm/s			250	500	800	1000
Rated thrust *1	200 W	N	683	341	213	174
	400 W	N	1388	694	433	347
Repeatability mm			±0.01			
Lost motion mm			0.1 or less			
Dynamic allowable load N			6567			
Static allowable moment N·m			MP: 552.0, MY: 551.0, MR: 485.0			
Dynamic allowable moment N·m			MP: 262.7, MY: 262.7, MR: 261.0			
Operating ambient temperature, humidity			0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage ambient temperature, humidity			-10 to 50°C (no freezing) 35 to 80% RH (no condensation)			
Atmosphere			No corrosive gas, explosive gas, or dust			

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

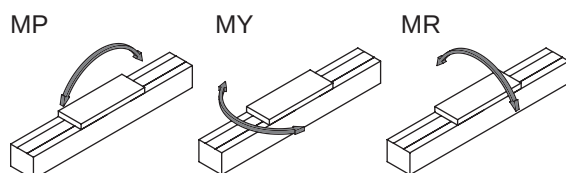
		(mm/s)					
Screw lead	Stroke length	100 to 750	800	850	900	950	1050
5		250	225	200	175	150	125
10		500	450	400	350	300	250
16		800	720	640	560	480	400
20		1000	900	800	700	600	500

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable overhang length

*Refer to page 152 for details.

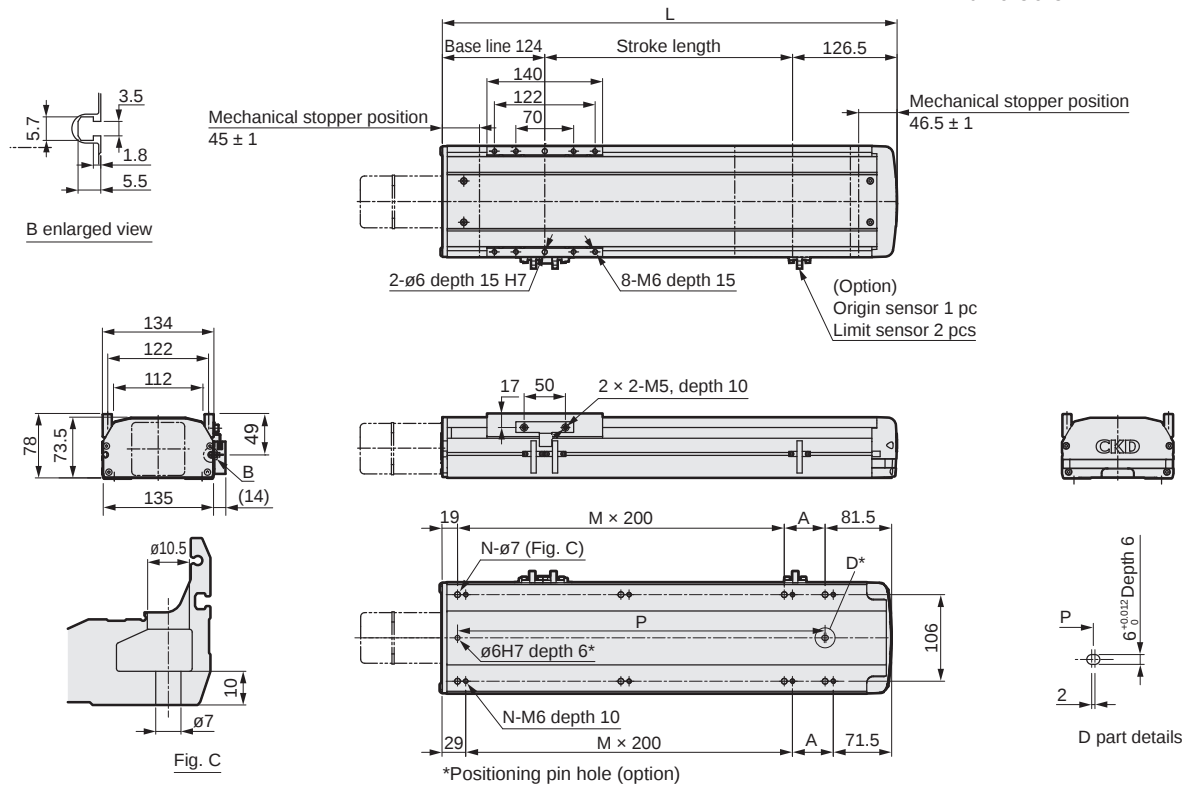
Moment direction



Dimensions Straight motor mounting

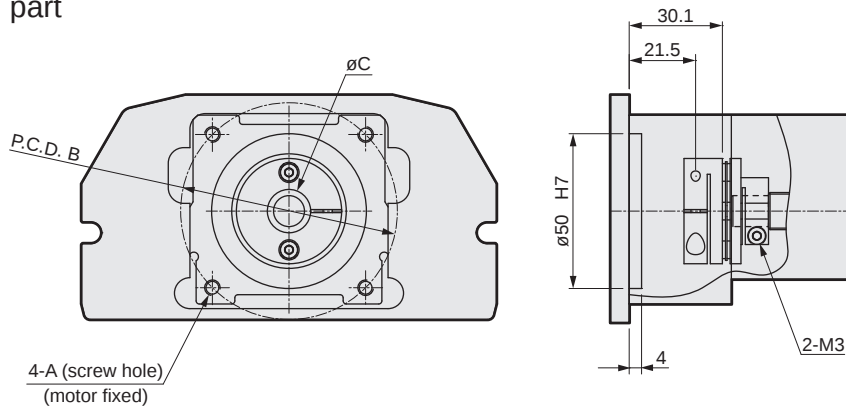
● ETS-14-****-E

· Refer to page 158 for grease nipple dimensions.



Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5	1050.5	1100.5	1150.5	1200.5	1250.5	1300.5
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	6.1	6.7	7.1	7.6	8.1	8.6	9.1	9.5	10.1	10.5	11.1	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.4	16.0

Motor mounting part



Mounted motor specification	A	B	C	Motor mounting bolt
M 200 W/400 W	M5	ø70	ø14	4-M5 × L18
Y 200 W/400 W	M5	ø70	ø14	4-M5 × L18
P 200 W/400 W	M4	ø70	ø11/ø14	4-M4 × L18
F 200 W/400 W	M5	ø70	ø9/ø14	4-M5 × L16/4-M5 × L18

List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Assembled at shipment	200 W/400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Origin sensor/Limit sensor]

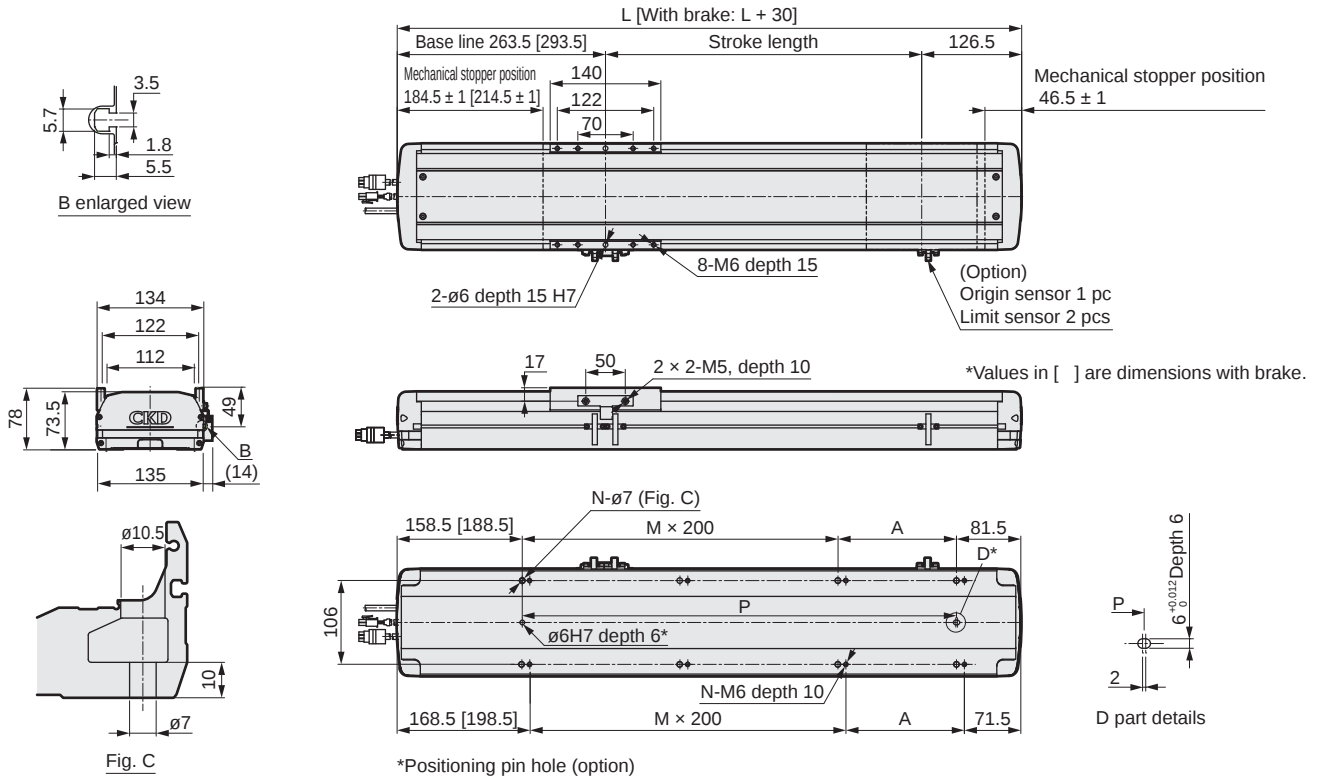
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Dimensions Motor built-in mounting

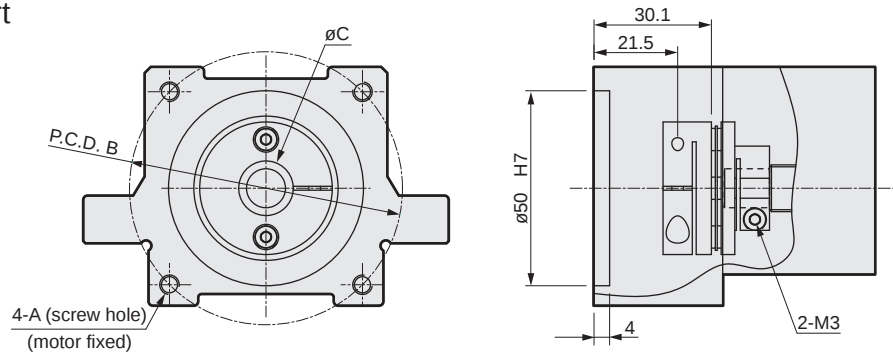
● ETS-14-*****-B

Refer to page 158 for grease nipple dimensions.



Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	Without brake	8.3	9.3	10.3	11.2	12.2	13.1	14.1	15.0	16.0	16.9	17.9	18.8	19.8	20.7	21.7	22.6	23.6	24.5	25.5	26.4
Weight (kg)	With brake	8.9	9.9	10.8	11.8	12.7	13.7	14.6	15.6	16.5	17.5	18.4	19.4	20.3	21.3	22.2	23.2	24.1	25.1	26.0	27.0

Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M	200 W/400 W	M5	ø70	ø14	4-M5 × L18
Y	200 W/400 W	M5	ø70	ø14	4-M5 × L18
P	200 W/400 W	M4	ø70	ø11/ø14	4-M4 × L18

List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor capacity	Motor mounting bolt
			Size Quantity
M	Assembled at shipment	200 W/400 W	M5 4
Y			M5 4
P			M4 4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Discontinued some variations

ETS-14 Series

Dimensions/List of attachments

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS-14 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 200 W/400 W



How to order

ETS - 14 - 05 005 - R M 2 N N N N N - X

A Body size
14 Body width 135 mm

B Screw lead
05 5 mm
10 10 mm
16 16 mm
20 20 mm

C Stroke length
005 to 105 (In 50 mm increments)

D Motor mounting direction *5
R Right mounting
D Bottom mounting
L Left mounting

E Mounted motor specification
M Select the mounted motor specification from the table below.
Y
P
F

F Motor capacity
2 200 W
4 400 W

G Brake
N None

H Origin sensor (1 pc) *1 *2 *3
N None
A Inside motor side
B Inside motor opposite side
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *1 *2 *3
N None
A Inside
B Outside

J Grease nipple *3 *4 *5
N None (Body mounting direction: Standard)
R Right
L Left

K Positioning pin hole
N None
P Yes

L Metal stopper specifications (ETS-X)
Standard
X Yes

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics Co., Ltd.	M	M
Sanyo Denki Co., Ltd.	M	M
YASKAWA Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
DENSO WAVE Incorporated (ETS-X only)	M	M
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

- *1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
 *2: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)
 For sensor outside mounting, the user can adjust the position. (Included at shipment)
 *3: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
 *4: "Body mounting direction: Standard" here indicates that either top or bottom mounting is possible.
 *5: When selecting motor mounting direction R, grease nipple R cannot be selected.
 When selecting L, grease nipple L cannot be selected.

*Refer to page 89 for the motor model No.

Specifications

Applicable motor capacity	200 W/400 W servo motor				
Drive method	Ball screw $\phi 16$				
Ball screw accuracy grade	C7				
Stroke length *1 mm	50 to 1050				
Screw lead mm	5	10	16	20	
Max. load capacity *1	Horizontal	200 W kg	95	75	44
		400 W kg	110	88	48
	Vertical	200 W kg	27	18	7
		400 W kg	33	22	10
Max. speed mm/s	250	500	800	1000	
Rated thrust *1	200 W N	683	341	213	174
	400 W N	1388	694	433	347
Repeatability mm	± 0.01				
Lost motion mm	0.1 or less				
Dynamic allowable load N	6567				
Static allowable moment N·m	MP: 552.0, MY: 551.0, MR: 485.0				
Dynamic allowable moment N·m	MP: 262.7, MY: 262.7, MR: 261.0				
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)				
Storage ambient temperature, humidity	-10 to 50°C (no freezing) 35 to 80% RH (no condensation)				
Atmosphere	No corrosive gas, explosive gas, or dust				

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

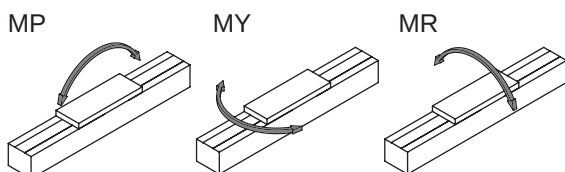
		(mm/s)					
Screw lead	Stroke length	100 to 750	800	850	900	950	1050
5		250	225	200	175	150	125
10		500	450	400	350	300	250
16		800	720	640	560	480	400
20		1000	900	800	700	600	500

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable overhang length

*Refer to page 152 for details.

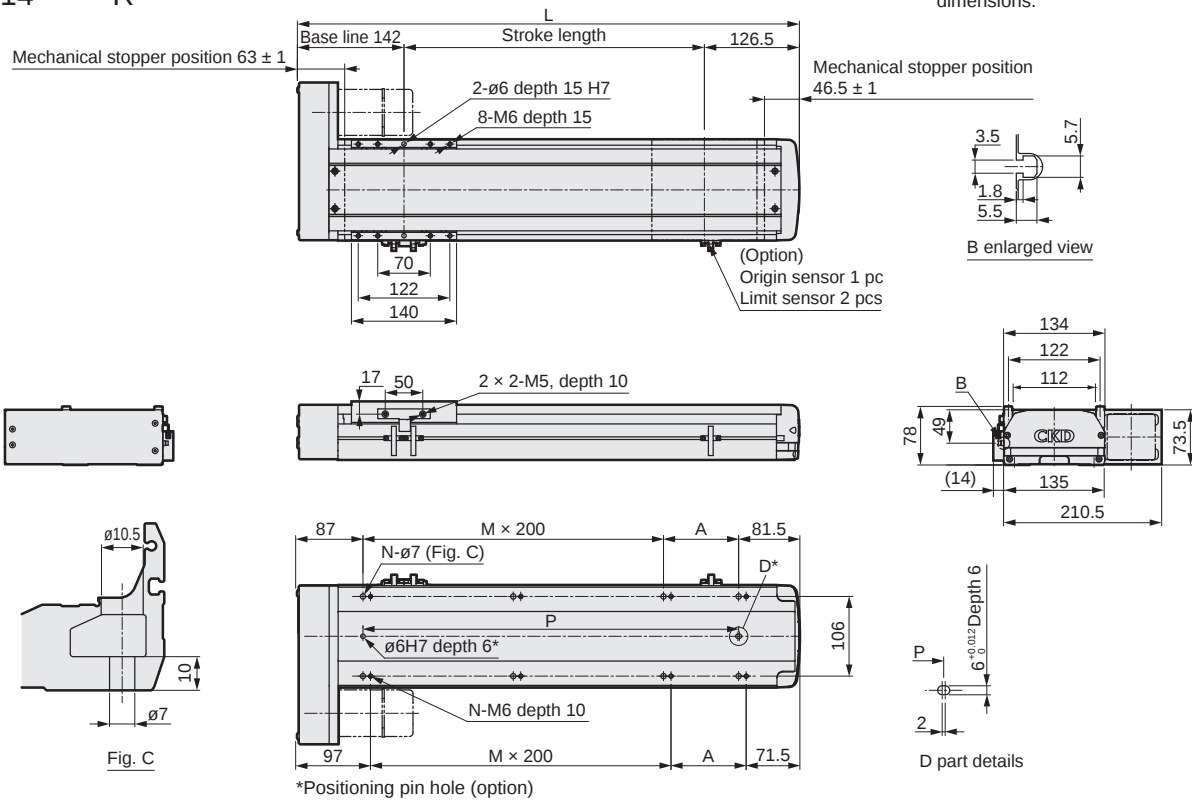
Moment direction



Dimensions Motor right-side mounting

● ETS-14-****-R

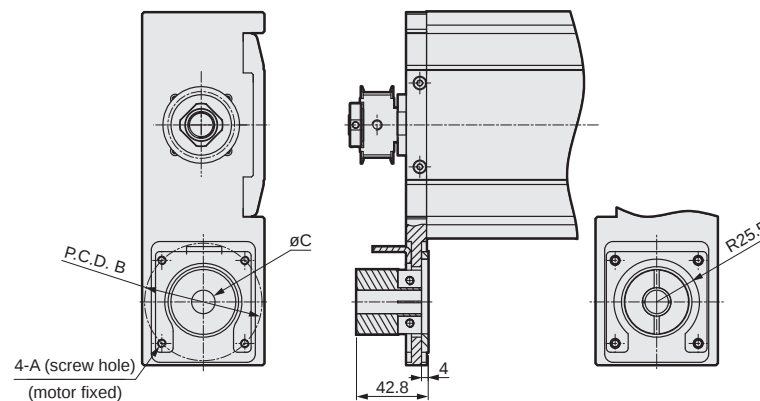
· Refer to page 158 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
Weight (kg)	6.9	7.5	7.9	8.4	8.9	9.4	9.9	10.3	10.9	11.3	11.9	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.2	16.8

Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M	200 W/400 W	M5	ø70	ø14	4-M5 × L18
Y	200 W/400 W	M5	ø70	ø14	4-M5 × L18
P	200 W/400 W	M4	ø70	ø11/ø14	4-M4 × L18
F	200 W/400 W	M5	ø70	ø9/ø14	4-M5 × L18

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Included at shipment	200 W/400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Origin sensor/Limit sensor]

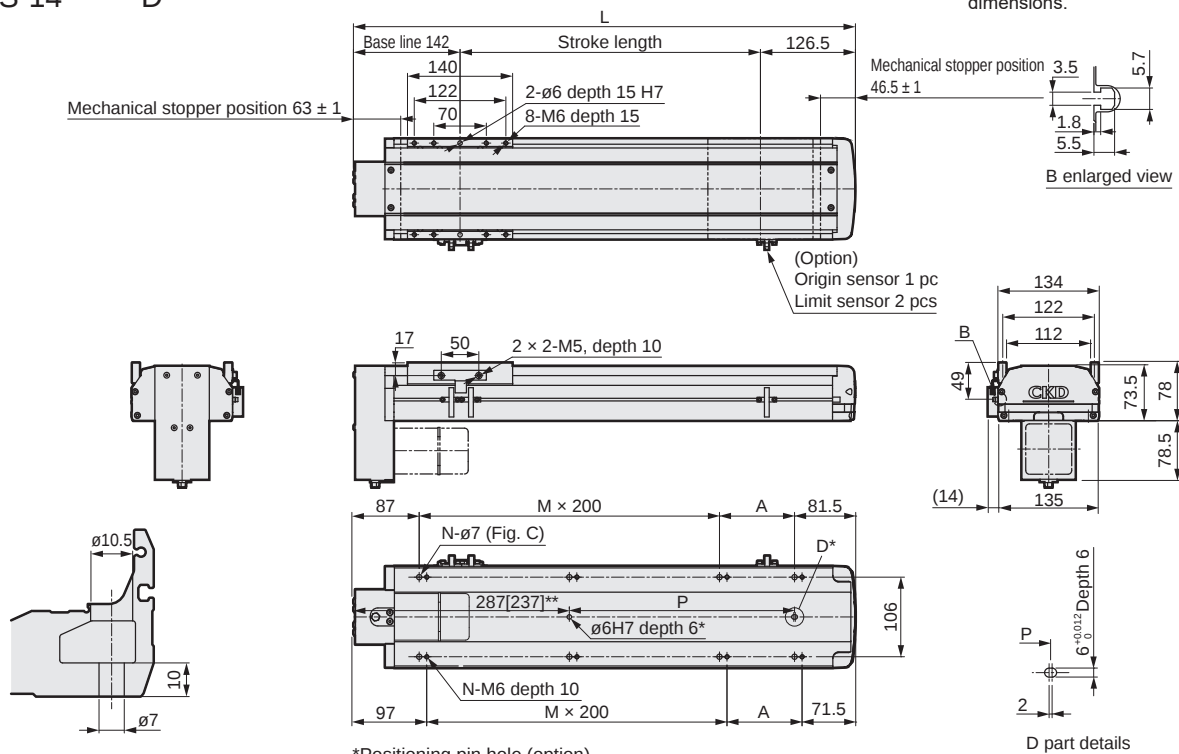
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Dimensions Motor bottom mounting

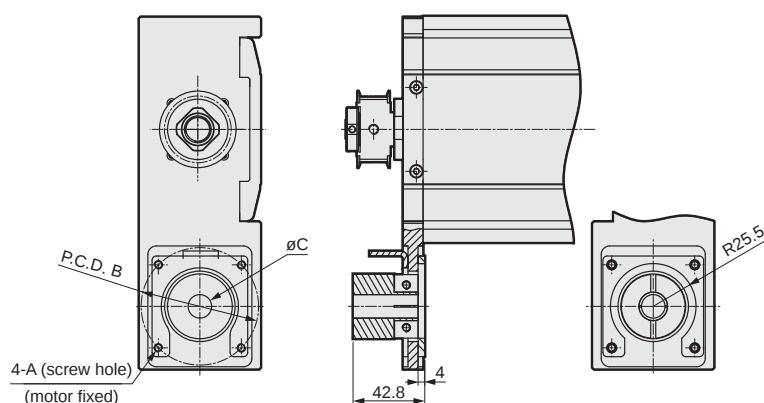
● ETS-14-*****-D

Refer to page 158 for grease nipple dimensions.



Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
P	0	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Weight (kg)	6.9	7.5	7.9	8.4	8.9	9.4	9.9	10.3	10.9	11.3	11.9	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.2	16.8

Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M	200 W/400 W	M5	$\phi 70$	$\phi 14$	4-M5 x L18
Y	200 W/400 W	M5	$\phi 70$	$\phi 14$	4-M5 x L18
P	200 W/400 W	M4	$\phi 70$	$\phi 11/\phi 14$	4-M4 x L18
F	200 W/400 W	M5	$\phi 70$	$\phi 9/\phi 14$	4-M5 x L18

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Included at shipment	200 W/400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Origin sensor/Limit sensor]

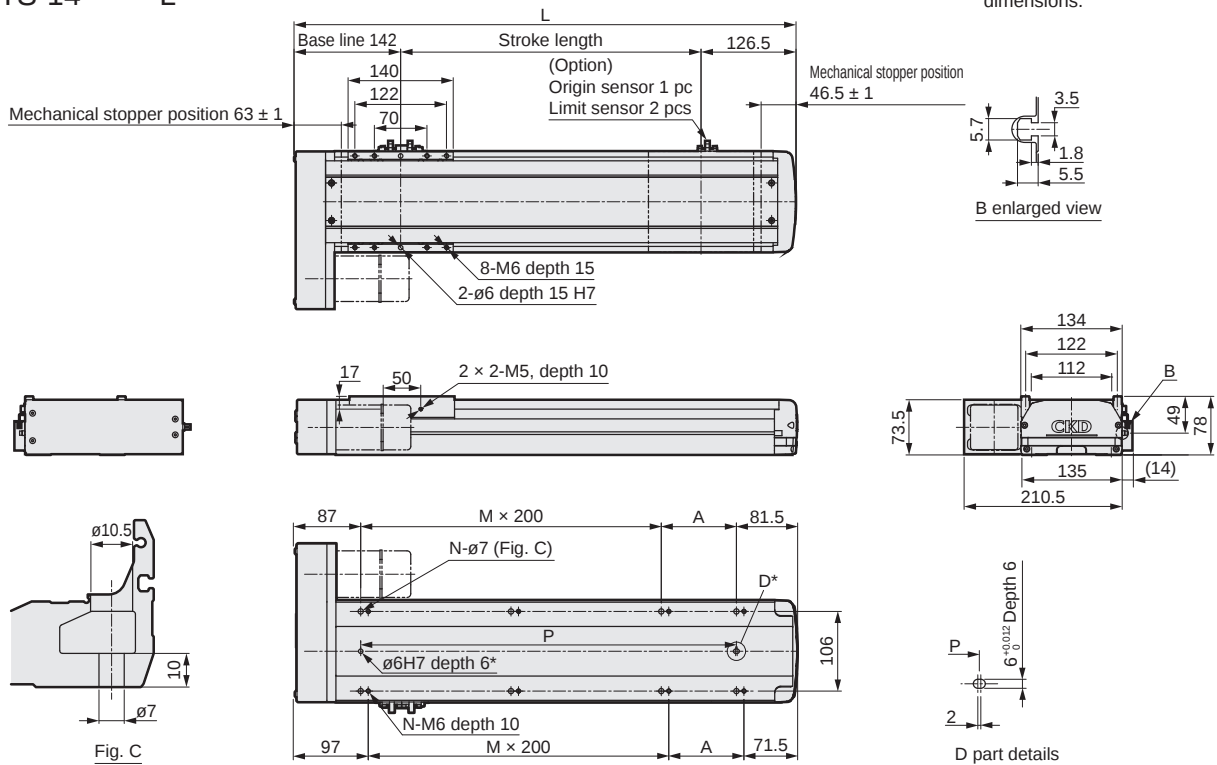
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Dimensions Motor left-side mounting

● ETS-14-****-L

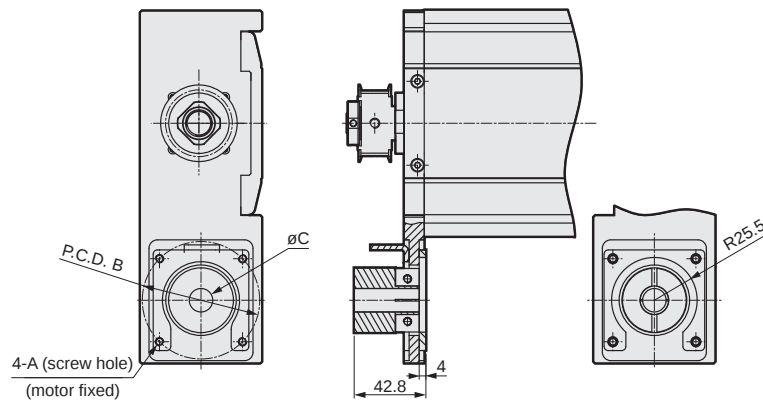
· Refer to page 158 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
Weight (kg)	6.9	7.5	7.9	8.4	8.9	9.4	9.9	10.3	10.9	11.3	11.9	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.2	16.8

Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M	200 W/400 W	M5	ø70	ø14	4-M5 × L18
Y	200 W/400 W	M5	ø70	ø14	4-M5 × L18
P	200 W/400 W	M4	ø70	ø11/ø14	4-M4 × L18
F	200 W/400 W	M5	ø70	ø9/ø14	4-M5 × L18

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Included at shipment	200 W/400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS-17 Series

Straight motor mounting, built-in mounting

● Servo motor capacity: 400 W/750 W



How to order

ETS	-	17	-	05	-	005	-	E	M	4	N	N	N	N	N	-	X
		A			B			C			D			E			F
		A Body size				B Screw lead				C Stroke length				D Motor mounting direction			
		17 Body width 170 mm				05 5 mm 10 10 mm 20 20 mm 40 40 mm				005 100 mm to (In 50 mm increments) 125 1250 mm				E Straight mounting B Built-in mounting			
								E Mounted motor specification				F Motor capacity					
								M Select the mounted motor specification from the table below. Y P F				4 400 W 8 750 W					
										G Brake				H Origin sensor (1 pc)			
										N None A Inside motor side B Inside motor opposite side C Outside motor side D Outside motor opposite side				N None A Inside B Outside			
												I Limit sensor (2 pcs)				J Grease nipple	
												N None A Inside B Outside				N None R Right L Left	
																K Positioning pin hole	
																N None P Yes	
																L Metal stopper specifications (ETS-X)	
																Standard X Yes	

*1: The built-in mounting motor mounting direction cannot be selected for the 750 W motor capacity.

Built-in mounting cannot be selected with metal stopper specifications either.

*2: "Yes" to the Brake can be selected only when the motor mounting direction is built-in mounting.

*3: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*4: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)

For sensor outside mounting, the user can adjust the position. (Included at shipment)

*5: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.

*6: "Body mounting direction: Standard" here indicates that either top or bottom mounting is possible.

Manufacturer	400 W	750 W
Mitsubishi Electric Corporation	M	M
Delta Electronics Co., Ltd.	M	M
Sanyo Denki Co., Ltd.	M	-
YASKAWA Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
DENSO WAVE Incorporated (ETS-X only)	M	-
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

*Refer to page 89 for the motor model No.

Specifications

Applicable motor capacity	400 W/750 W servo motor				
Drive method	Ball screw ϕ 20				
Ball screw accuracy grade	C7				
Stroke length	mm	50 to 1250			
Screw lead	mm	5	10	20	40
Max. load capacity *1	Horizontal	400 W kg	120	110	75
		750 W kg	120	120	83
	Vertical	400 W kg	40	30	14
		750 W kg	50	40	25
Max. speed	mm/s	250	500	1000	2000
Rated thrust *1	400 W	N	1388	694	347
	750 W	N	2100	1050	525
Repeatability	mm	± 0.01			
Lost motion		0.1 or less			
Dynamic allowable load	N	10102			
Static allowable moment	N·m	MP: 1034.0, MY: 1032.0, MR: 908.0			
Dynamic allowable moment	N·m	MP: 424.3, MY: 424.3, MR: 520.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

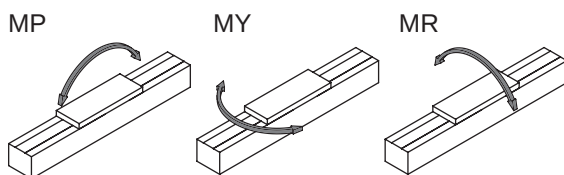
		(mm/s)				
Screw lead	Stroke length	100 to 850	950	1050	1150	1250
5		250	225	200	175	150
10		500	450	400	350	300
20		1000	900	800	700	600
40		2000	1800	1600	1400	1200

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable overhang length

*Refer to page 152 for details.

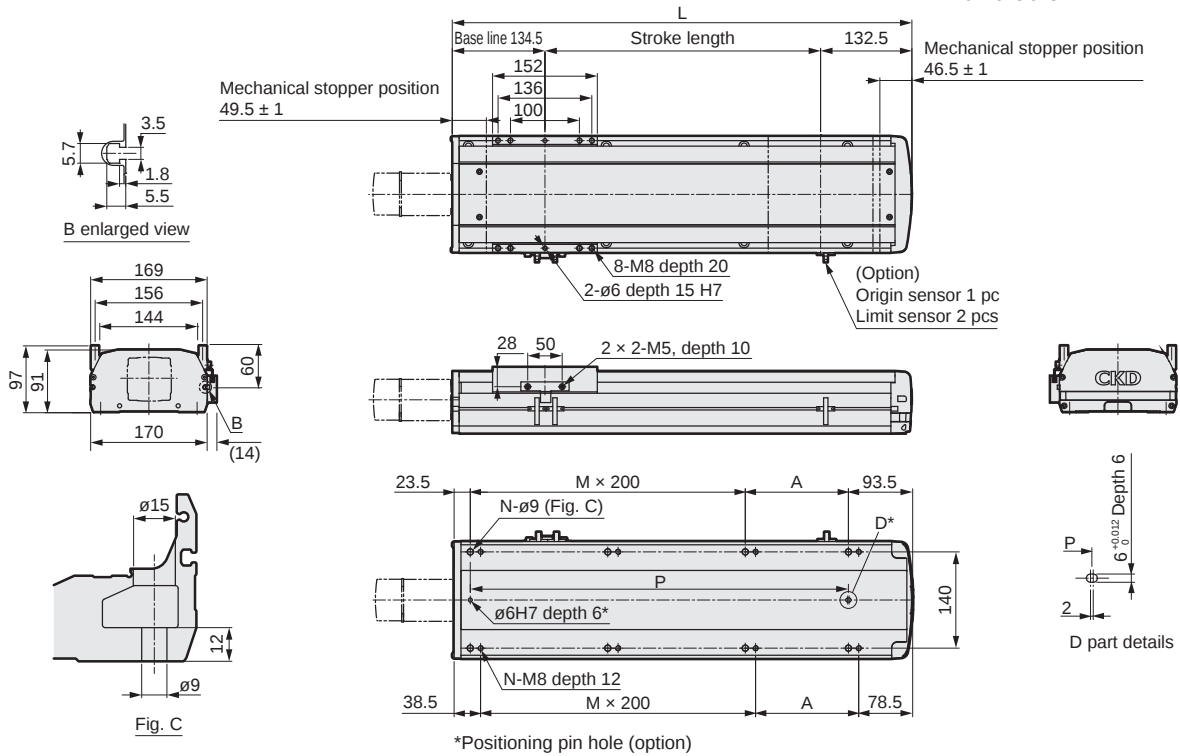
Moment direction



Dimensions Straight motor mounting

● ETS-17-****-E

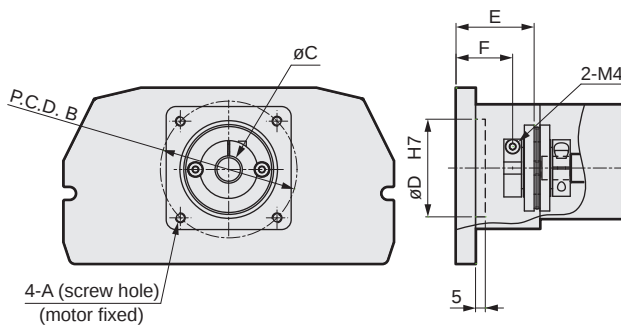
· Refer to page 158 for grease nipple dimensions.



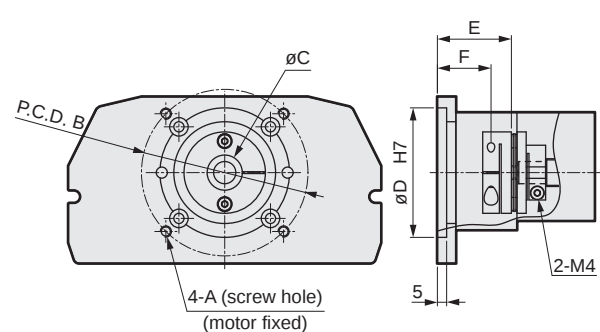
Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217	1267	1317	1367	1417	1467	1517
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	9.5	10.3	11.1	11.9	12.7	13.4	14.2	15.0	15.8	16.5	17.3	18.1	18.9	19.6	20.4	21.2	22.0	22.7	23.5	24.3	25.1	25.9	26.7	27.5	28.3

Motor mounting part

● ETS-17-400W



● ETS-17-750W



Mounted motor specification	A	B	C	D	E	F	Motor mounting bolt
M 400 W/750 W	M5/M6	ø70/ø90	ø14/ø19	50/70	40	29	4-M5 × L18/4-M6 × L16
Y 400 W/750 W	M5/M6	ø70/ø90	ø14/ø19	50/70	40	29	4-M5 × L18/4-M6 × L16
P 400 W/750 W	M4/M5	ø70/ø90	ø14/ø19	50/70	40	29	4-M4 × L18/4-M5 × L16
F 400 W/750 W	M5/M6	ø70/ø100	ø14/ø14	50/80	40/26	29/15	4-M5 × L18/4-M6 × L16

List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Assembled at shipment	400 W/750 W	M5/M6	4
Y			M5/M6	4
P			M4/M5	4
F			M5/M6	4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

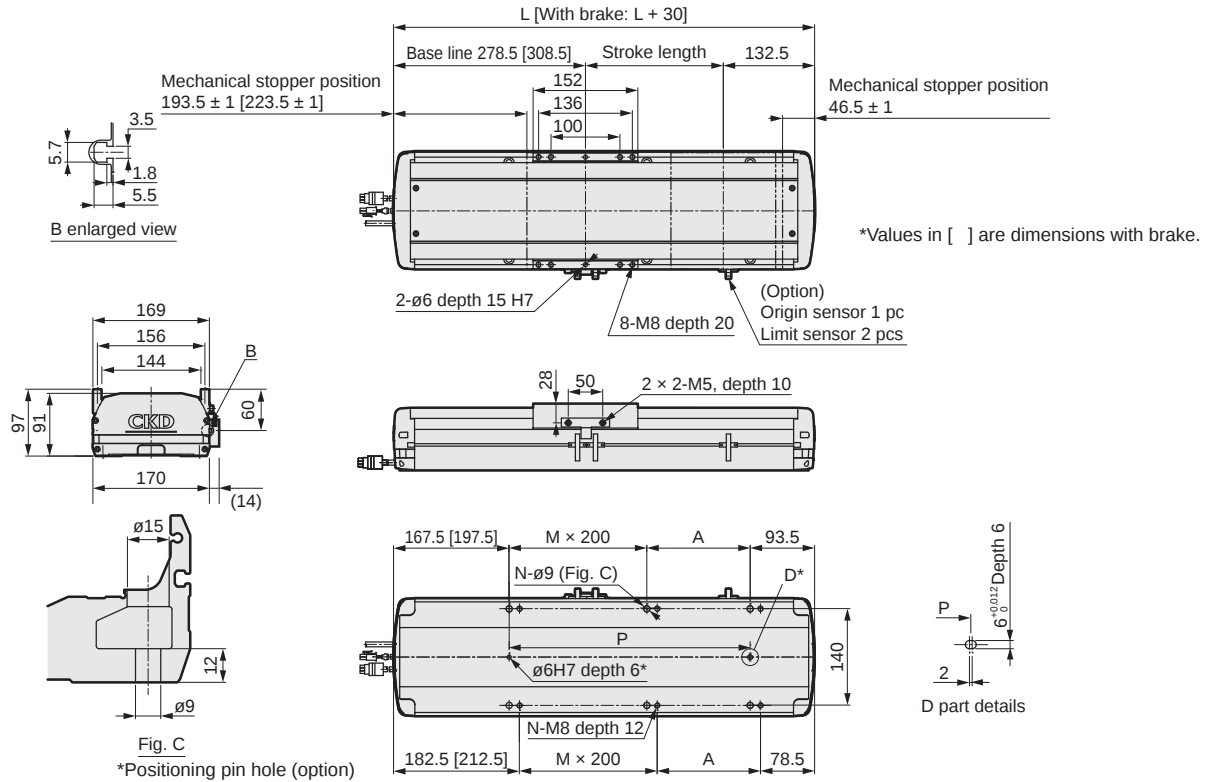
*Refer to page 156 for sensor specifications.

Dimensions Motor built-in mounting

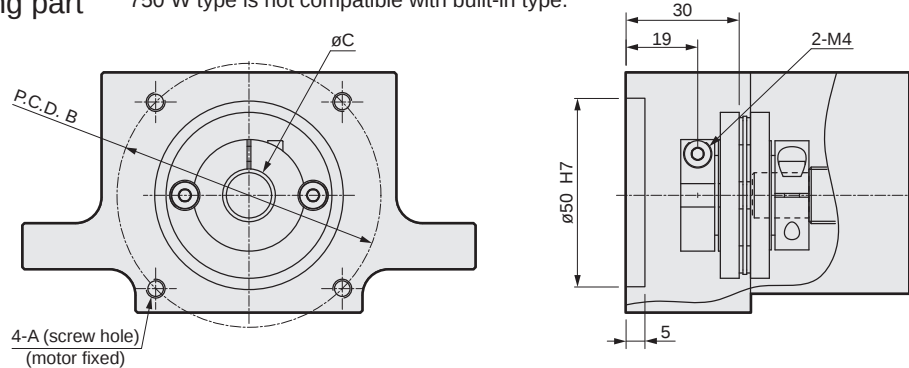
● ETS-17-*****-B

* 750 W type is not compatible with built-in type.

Refer to page 158 for grease nipple dimensions.



Motor mounting part * 750 W type is not compatible with built-in type.



Mounted motor specification		A	B	C	Motor mounting bolt
M	400 W	M5	ø70	ø14	4-M5 × L18
Y	400 W	M5	ø70	ø14	4-M5 × L18
P	400 W	M4	ø70	ø14	4-M4 × L18

List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor capacity	Motor mounting bolt
			Size Quantity
M	Assembled at shipment	400 W	M5 4
Y			M5 4
P			M4 4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Discontinued some variations

ETS-17 Series

Dimensions/List of attachments

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS-17 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 400 W/750 W



How to order

ETS - 17 - 05 005 - R M 4 N N N N N - X

A Body size
17 Body width 170 mm

B Screw lead
05 5 mm
10 10 mm
20 20 mm
40 40 mm

C Stroke length
005 100 mm
to (In 50 mm increments)
125 1250 mm

D Motor mounting direction *5
R Right mounting
D Bottom mounting
L Left mounting

E Mounted motor specification
M Select the mounted motor specification from the table below.
Y
P
F

F Motor capacity
4 400 W
8 750 W

G Brake
N None

H Origin sensor (1 pc) *1 *2 *3
N None
A Inside motor side
B Inside motor opposite side
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *1 *2 *3
N None
A Inside
B Outside

K Positioning pin hole
N None
P Yes

J Grease nipple *3 *4 *5
N None (Body mounting direction: Standard)
R Right
L Left

L Metal stopper specifications (ETS-X)
Standard
X Yes

Manufacturer	400 W	750 W
Mitsubishi Electric Corporation	M	M
Delta Electronics Co., Ltd.	M	M
Sanyo Denki Co., Ltd.	M	-
YASKAWA Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
DENSO WAVE Incorporated (ETS-X only)	M	-
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

*Refer to page 89 for the motor model No.

- *1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
 *2: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)
 For sensor outside mounting, the user can adjust the position. (Included at shipment)
 *3: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
 *4: "Body mounting direction: Standard" here indicates that either top or bottom mounting is possible.
 *5: When selecting motor mounting direction R, grease nipple R cannot be selected.
 When selecting L, grease nipple L cannot be selected.

Specifications

Applicable motor capacity	400 W/750 W servo motor			
Drive method	Ball screw ϕ 20			
Ball screw accuracy grade	C7			
Stroke length mm	50 to 1250			
Screw lead mm	5	10	20	40
Max. load capacity *1	Horizontal	400 W kg	120	110
		750 W kg	120	83
	Vertical	400 W kg	40	30
		750 W kg	50	40
Max. speed mm/s	250	500	1000	2000
Rated thrust *1	400 W N	1388	694	347
	750 W N	2100	1050	525
Repeatability mm	± 0.01			
Lost motion	0.1 or less			
Dynamic allowable load N	10102			
Static allowable moment N·m	MP: 1034.0, MY: 1032.0, MR: 908.0			
Dynamic allowable moment N·m	MP: 424.3, MY: 424.3, MR: 520.3			
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage ambient temperature, humidity	-10 to 50°C (no freezing) 35 to 80% RH (no condensation)			
Atmosphere	No corrosive gas, explosive gas, or dust			

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

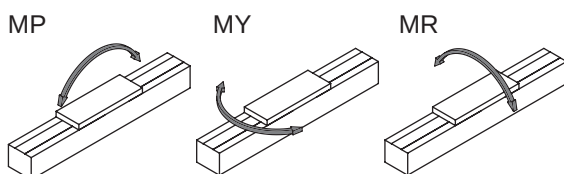
		(mm/s)				
Screw lead	Stroke length	100 to 850	950	1050	1150	1250
5		250	225	200	175	150
10		500	450	400	350	300
20		1000	900	800	700	600
40		2000	1800	1600	1400	1200

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable overhang length

*Refer to page 152 for details.

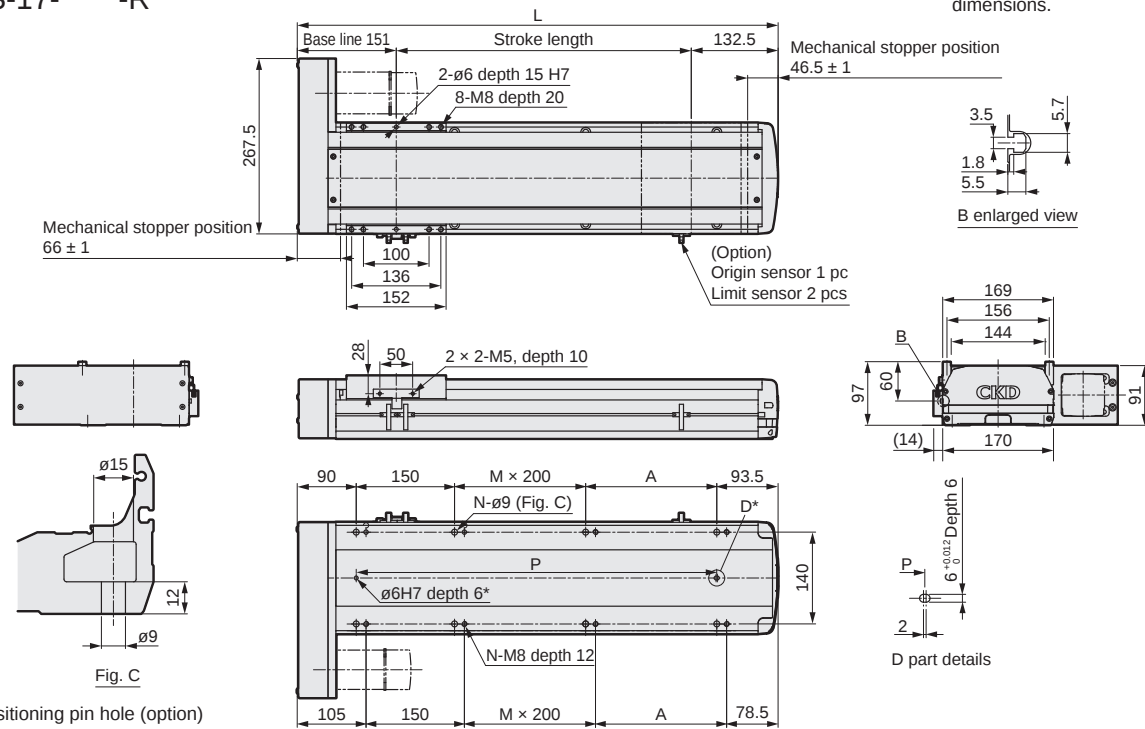
Moment direction



Dimensions Motor right-side mounting

● ETS-17-****-R

· Refer to page 158 for grease nipple dimensions.

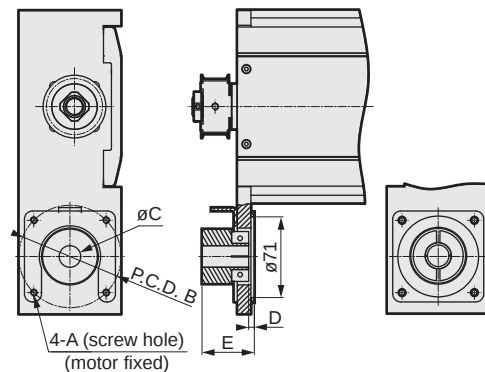
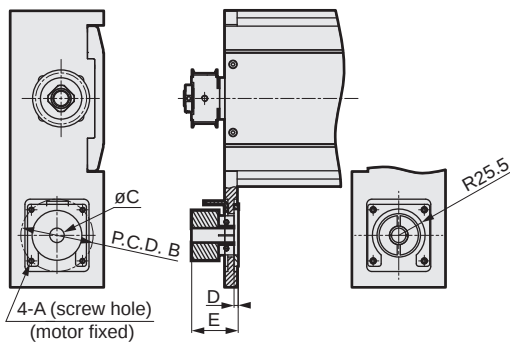


Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	333.5	383.5	433.5	483.5	533.5	583.5	633.5	683.5	733.5	783.5	833.5	883.5	933.5	983.5	1033.5	1083.5	1133.5	1183.5	1233.5	1283.5	1333.5	1383.5	1433.5	1483.5	1533.5
A	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	10.8	11.6	12.4	13.2	14.0	14.7	15.5	16.3	17.1	17.8	18.6	19.4	20.2	20.9	21.7	22.5	23.3	24.0	24.8	25.6	26.4	27.2	28.0	28.8	29.6

Motor mounting part

● ETS-17-400W

● ETS-17-750W



Mounted motor specification		A	B	C	D	E	Motor mounting bolt
M	400 W/750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 × L18/4-M6 × L24
Y	400 W/750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 × L18/4-M6 × L24
P	400 W/750 W	M4/M5	ø70/ø90	ø14/ø19	4/5	45/46	4-M4 × L18/4-M5 × L24
F	400 W/750 W	M5/M6	ø70/ø100	ø14/ø14	4/7	45/48	4-M5 × L18/4-M6 × L25

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt/pulley	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Included at shipment	400 W/750 W	M5/M6	4
Y			M5/M6	4
P			M4/M5	4
F			M5/M6	4

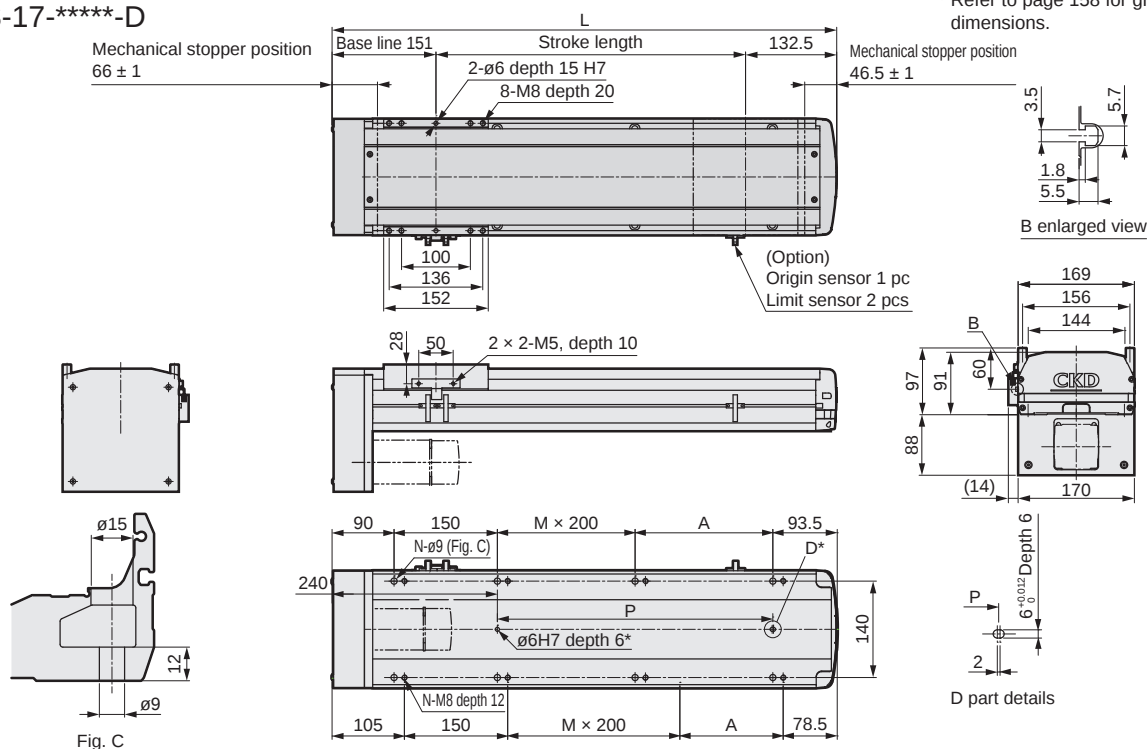
[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Dimensions Motor bottom mounting

● ETS-17-*****-D



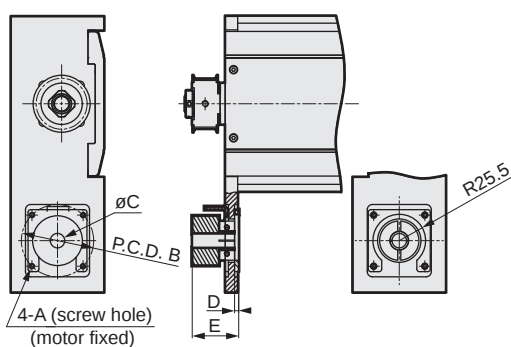
*Positioning pin hole (option)

Round positioning pin holes are available only for stroke 50

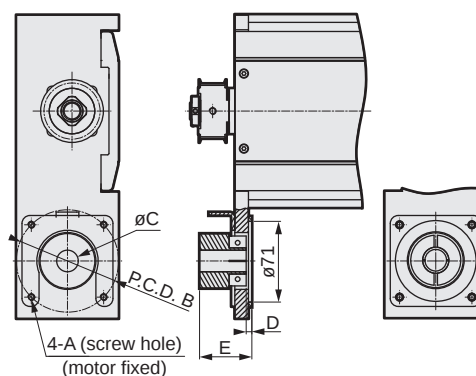
Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	333.5	383.5	433.5	483.5	533.5	583.5	633.5	683.5	733.5	783.5	833.5	883.5	933.5	983.5	1033.5	1083.5	1133.5	1183.5	1233.5	1283.5	1333.5	1383.5	1433.5	1483.5	1533.5
A	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	11.1	11.9	12.7	13.5	14.3	15.0	15.8	16.6	17.4	18.1	18.9	19.7	20.5	21.2	22.0	22.8	23.6	24.3	25.1	25.9	26.7	27.5	28.3	29.1	29.9

Motor mounting part

● ETS-17-400W



● ETS-17-750W



Mounted motor specification		A	B	C	D	E	Motor mounting bolt
M	400 W/750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 × L18/4-M6 × L24
Y	400 W/750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 × L18/4-M6 × L24
P	400 W/750 W	M4/M5	ø70/ø90	ø14/ø19	4/5	45/46	4-M4 × L18/4-M5 × L24
F	400 W/750 W	M5/M6	ø70/ø100	ø14/ø14	4/7	45/48	4-M5 × L18/4-M6 × L25

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt/pulley	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Included at shipment	400 W/750 W	M5/M6	4
Y			M5/M6	4
P			M4/M5	4
F			M5/M6	4

[Origin sensor/Limit sensor]

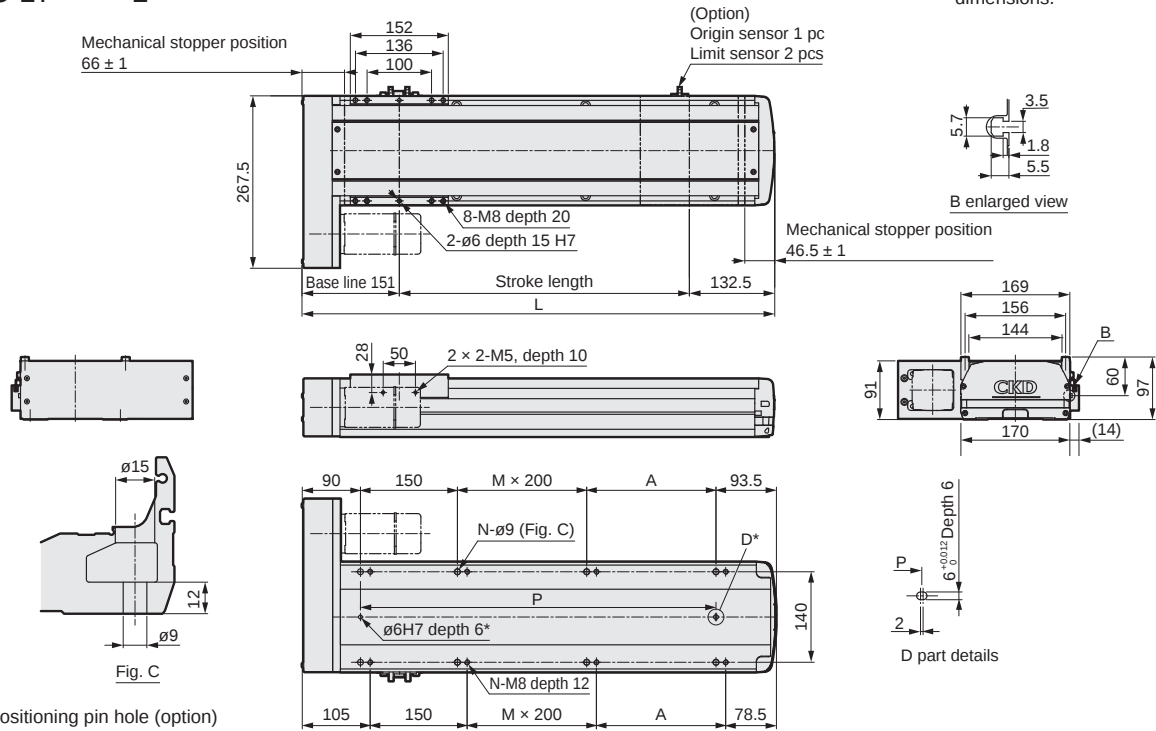
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Dimensions Motor left-side mounting

● ETS-17-*****-L

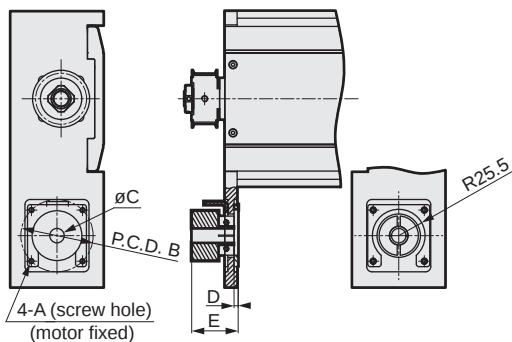
- Refer to page 158 for grease nipple dimensions.



Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	333.5	383.5	433.5	483.5	533.5	583.5	633.5	683.5	733.5	783.5	833.5	883.5	933.5	983.5	1033.5	1083.5	1133.5	1183.5	1233.5	1283.5	1333.5	1383.5	1433.5	1483.5	1533.5
A	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	10.8	11.6	12.4	13.2	14.0	14.7	15.5	16.3	17.1	17.8	18.6	19.4	20.2	20.9	21.7	22.5	23.3	24.0	24.8	25.6	26.4	27.2	28.0	28.8	29.6

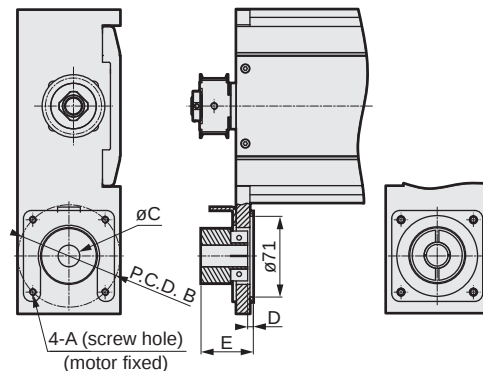
Motor mounting part

● ETS-17-400W



Mounted motor specification		A	B	C	D	E	Motor mounting bolt
M	400 W/750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 × L18/4-M6 × L24
Y	400 W/750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 × L18/4-M6 × L24
P	400 W/750 W	M4/M5	ø70/ø90	ø14/ø19	4/5	45/46	4-M4 × L18/4-M5 × L24
F	400 W/750 W	M5/M6	ø70/ø100	ø14/ø14	4/7	45/48	4-M5 × L18/4-M6 × L25

● ETS-17-750W



List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt/pulley	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Included at shipment	400 W/750 W	M5/M6	4
Y			M5/M6	4
P			M4/M5	4
F			M5/M6	4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS-22 Series

Straight motor mounting, built-in mounting

● Servo motor capacity: 750 W



How to order

Ordering code: ETS - 22 - 05 005 - E M 8 N N N N N - X

A Body size
22 Body width 220 mm

B Screw lead
05 5 mm
10 10 mm
25 25 mm
40 40 mm

C Stroke length
005 100 mm
to (In 50 mm increments)
150 1500 mm

D Motor mounting direction *1 *2
E Straight mounting
B Built-in mounting

E Mounted motor specification
M Select the mounted motor
Y specification from
P the table below.
F

F Motor capacity
8 750 W

G Brake *2
N None
B Yes

H Origin sensor (1 pc) *3 *4 *5
N None
A Inside motor side
B Inside motor opposite side
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *3 *4 *5
N None
A Inside
B Outside

J Grease nipple *5 *6
N None (Body mounting direction: Standard)
R Right
L Left

K Positioning pin hole
N None
P Yes

L Metal stopper specifications (ETS-X) *1
Standard
X Yes

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	-
YASKAWA Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
DENSO WAVE Incorporated (ETS-X only)	-
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

*1: Built-in mounting cannot be selected with metal stopper specifications.

*2: "Yes" to the Brake can be selected only when the motor mounting direction is built-in mounting.

*3: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*4: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)

For sensor outside mounting, the user can adjust the position. (Included at shipment)

*5: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.

*6: "Body mounting direction: Standard" here indicates that either top or bottom mounting is possible.

*Refer to page 89 for the motor model No.

Specifications

Applicable motor capacity		750 W servo motor			
Drive method		Ball screw ø25			ø20
Ball screw accuracy grade		C7			
Stroke length mm		50 to 1500			
Screw lead mm		5	10	25	40
Max. load capacity *1	Horizontal kg	150	150	120	60
	Vertical kg	55	45	20	10
Max. speed mm/s		250	500	1250	2000
Rated thrust *1 N		2100	1050	420	260
Repeatability mm		±0.01			
Lost motion mm		0.1 or less			
Dynamic allowable load N		14174			
Static allowable moment N·m		MP: 2052.0, MY: 2052.0, MR: 1810.0			
Dynamic allowable moment N·m		MP: 1098.5, MY: 1098.5, MR: 999.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

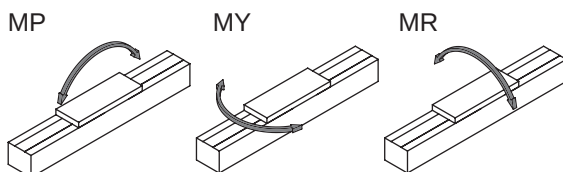
</

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable overhang length

*Refer to page 152 for details.

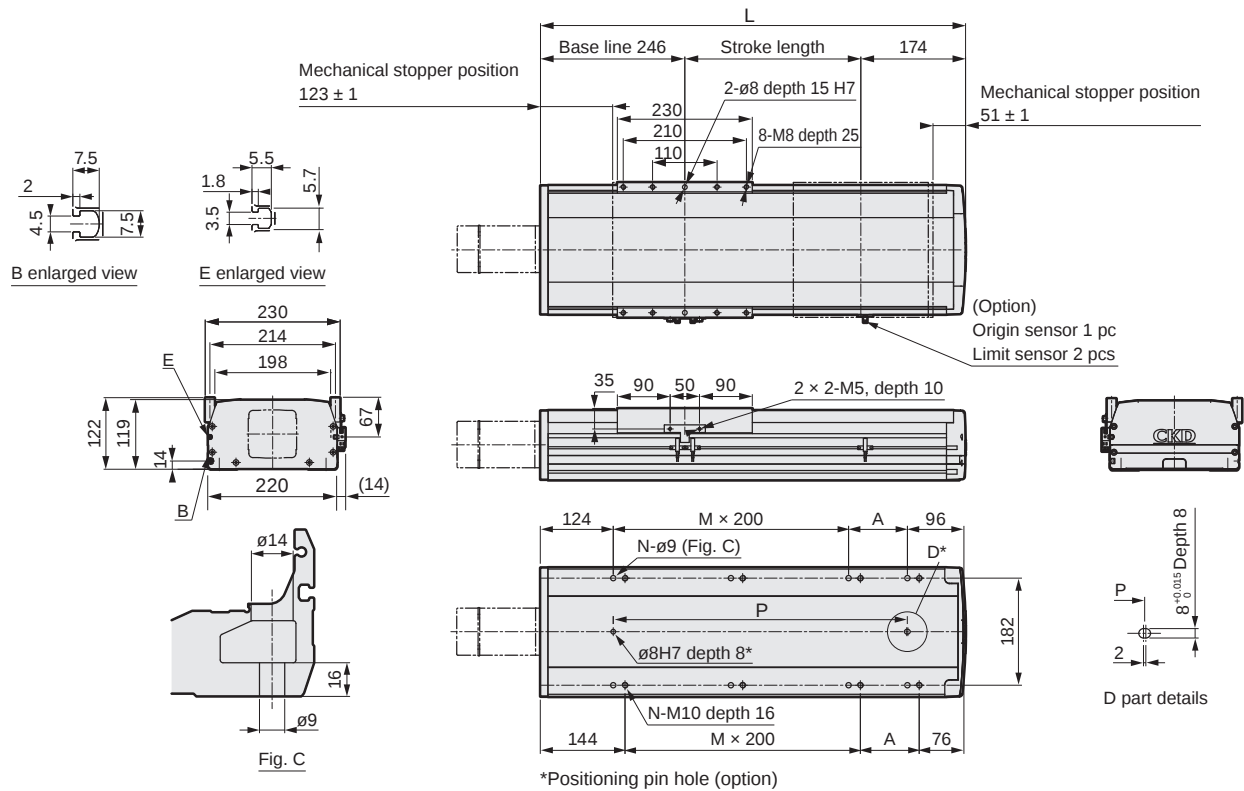
Moment direction



Dimensions Straight motor mounting

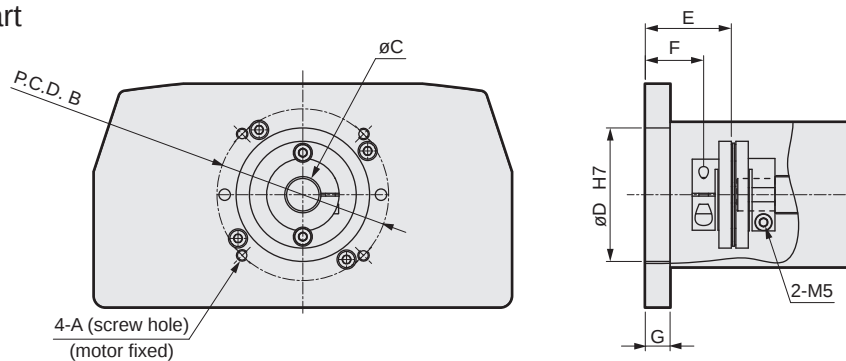
● ETS-22-*****-E

· Refer to page 158 for grease nipple dimensions.



Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470	1520	1570	1620	1670	1720	1770	1820	1870	1920
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	20.0	21.2	22.4	23.7	24.9	26.1	27.3	28.5	29.8	31.0	32.2	33.4	34.6	35.9	37.1	38.3	39.5	40.7	42	43.2	44.4	45.6	46.8	48.1	49.3	50.5	51.7	52.9	54.1	55.3

Motor mounting part



Mounted motor specification	A	B	C	D	E	F	G	Motor mounting bolt
M	750 W	M6	ø90	ø19	70	45.1	30.6	13
Y	750 W	M6	ø90	ø19	70	45.1	30.6	13
P	750 W	M5	ø90	ø19	70	45.1	30.6	13
F	750 W	M6	ø100	ø14	80	28.7	14.2	5

List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Assembled at shipment	750 W	M6	4
Y			M6	4
P			M5	4
F			M6	4

[Origin sensor/Limit sensor]

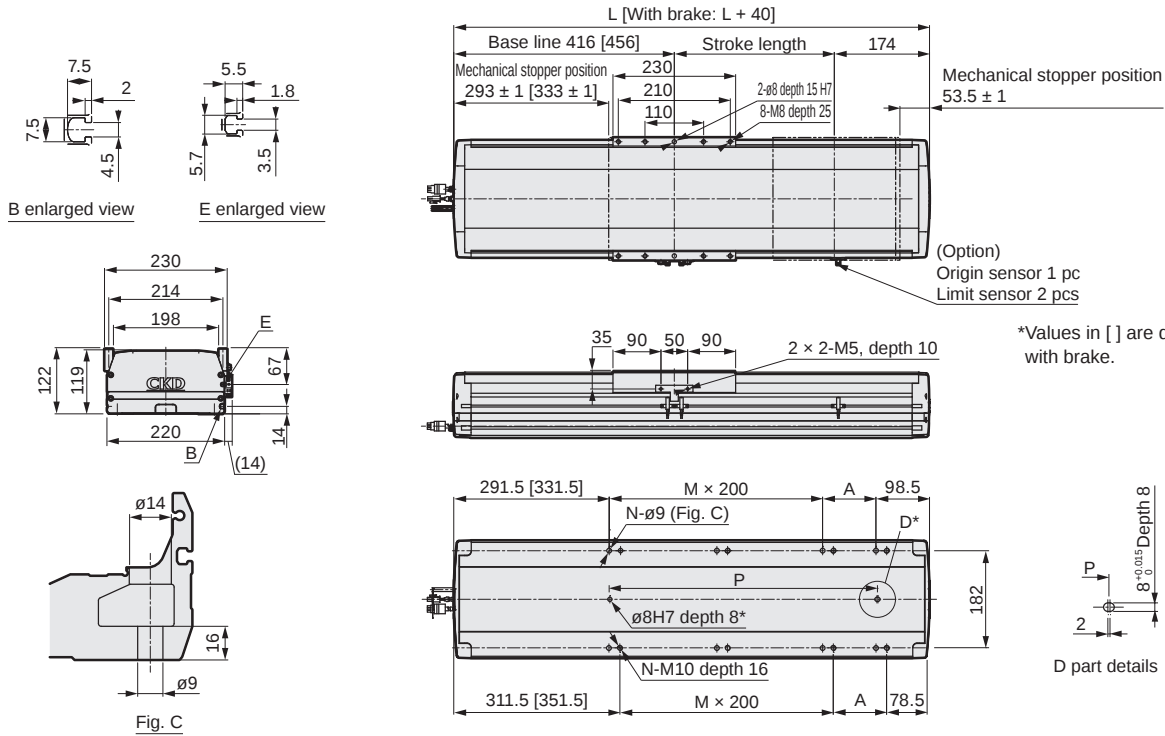
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Dimensions Motor built-in mounting

● ETS-22-*****-B

· Refer to page 158 for grease nipple dimensions.

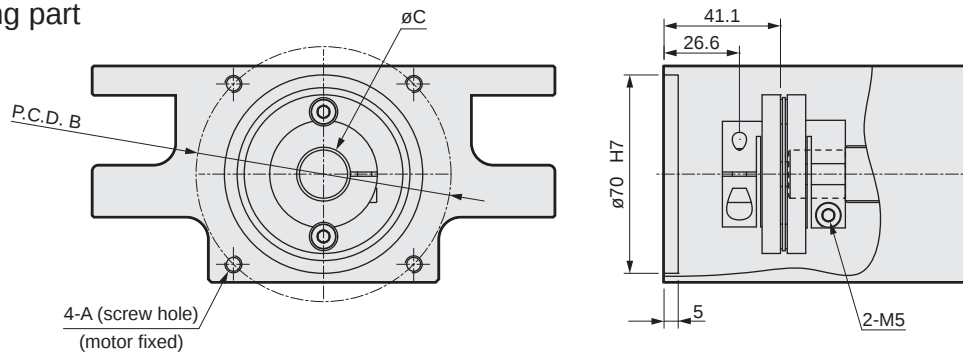


*Values in [] are dimensions with brake.

*Positioning pin hole (option)

Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	7	7	7	7	8	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	26.1	28.1	30.2	32.2	34.2	36.3	38.3	40.4	42.4	44.4	46.5	48.5	50.6	52.6	54.6	56.7	58.7	60.7	62.8	64.8	66.9	68.9	70.9	73.0	75.0	77.1	79.1	81.1	83.2	85.2
Weight (kg) With brake	27.4	29.4	31.4	33.4	35.5	37.5	39.5	41.6	43.6	45.7	47.7	49.7	51.8	53.8	55.9	57.9	59.9	62.0	64.0	66.0	68.1	70.1	72.2	74.2	76.2	78.3	80.3	82.4	84.4	86.4

Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M	750 W	M6	ø90	ø19	4-M6 × L16
Y	750 W	M6	ø90	ø19	4-M6 × L16
P	750 W	M5	ø90	ø19	4-M5 × L16

List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Assembled at shipment	750 W	M6	4
Y			M6	4
P			M5	4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Discontinued some variations

ETS-22 Series

Dimensions/List of attachments

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS-22 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 750 W



How to order

ETS - 22 - 05 005 - R M 8 N N N N N - X

A B C D E F G H I J K L

A Body size
22 Body width 220 mm

B Screw lead
05 5 mm
10 10 mm
25 25 mm
40 40 mm

C Stroke length
005 100 mm
to (In 50 mm increments)
150 1500 mm

E Mounted motor specification
M Select the mounted motor specification from the table below.
Y
P
F

F Motor capacity
8 750 W

G Brake
N None

H Origin sensor (1 pc) *1 *2 *3
N None
A Inside motor side
B Inside motor opposite side
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *1 *2 *3
N None
A Inside
B Outside

J Grease nipple *3 *4 *5
N None (Body mounting direction: Standard)
R Right
L Left

K Positioning pin hole
N None
P Yes

L Metal stopper specifications (ETS-X)
Standard
X Yes

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	-
YASKAWA Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
DENSO WAVE Incorporated (ETS-X only)	-
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

D Motor mounting direction *5
R Right mounting
D Bottom mounting
L Left mounting

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)

For sensor outside mounting, the user can adjust the position. (Included at shipment)

*3: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.

*4: "Body mounting direction: Standard" here indicates that either top or bottom mounting is possible.

*5: When selecting motor mounting direction R, grease nipple R cannot be selected.

When selecting L, grease nipple L cannot be selected.

*Refer to page 89 for the motor model No.

Specifications

Applicable motor capacity		750 W servo motor			
Drive method		Ball screw ø25			ø20
Ball screw accuracy grade		C7			
Stroke length mm		50 to 1500			
Screw lead mm		5	10	25	40
Max. load capacity *1	Horizontal kg	150	150	120	60
	Vertical kg	55	45	20	10
Max. speed mm/s		250	500	1250	2000
Rated thrust *1 N		2100	1050	420	260
Repeatability mm		±0.01			
Lost motion mm		0.1 or less			
Dynamic allowable load N		14174			
Static allowable moment N·m		MP: 2052.0, MY: 2052.0, MR: 1810.0			
Dynamic allowable moment N·m		MP: 1098.5, MY: 1098.5, MR: 999.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

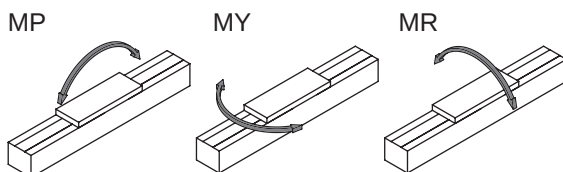
		(mm/s)						
Stroke length	Screw lead	100 to 900	1000	1100	1200	1300	1400	1500
		5	250	225	200	175	150	125
	10	500	450	400	350	300	250	200
	25	1250	1125	1000	875	750	625	500
Stroke length	Screw lead	100 to 850	950	1050	1150	1250	1350	1450
		40	2000	1800	1600	1400	1200	1000
							800	600

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable overhang length

*Refer to page 152 for details.

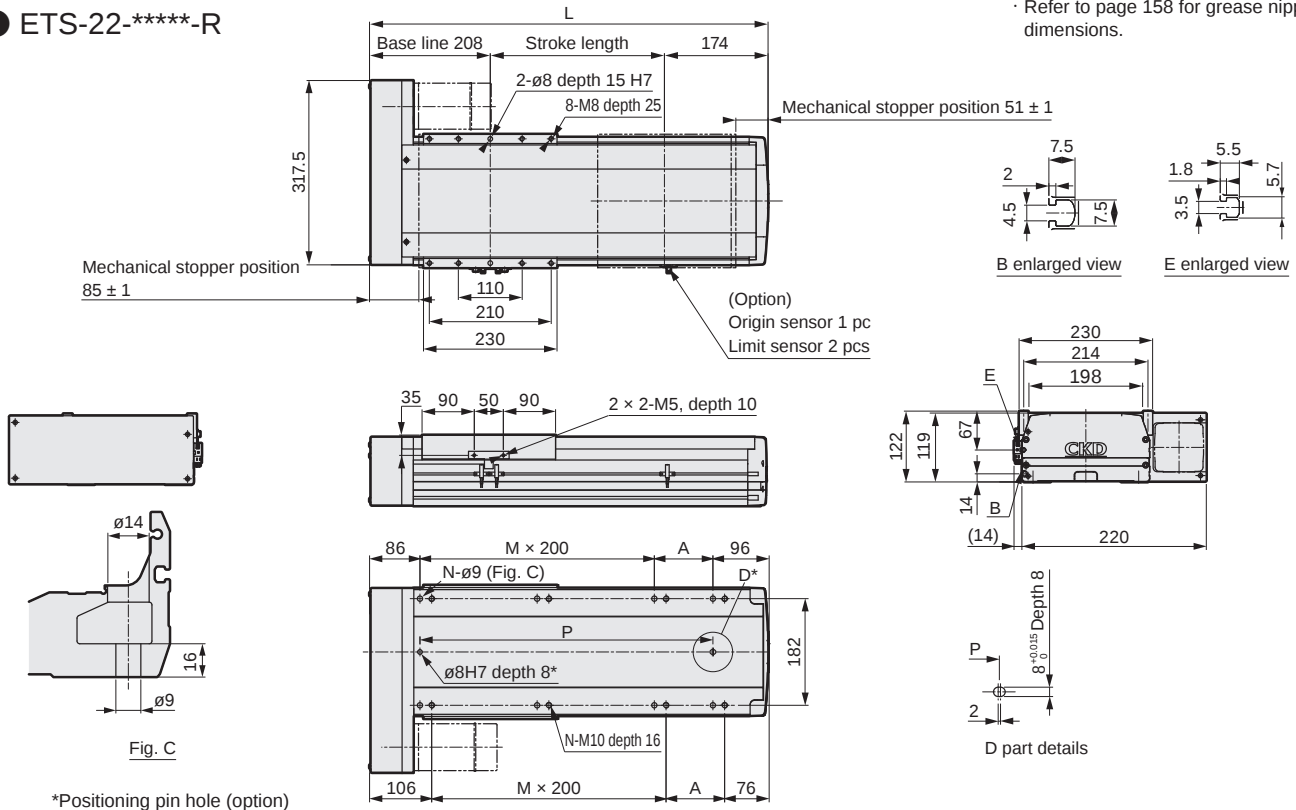
Moment direction



Dimensions Motor right-side mounting

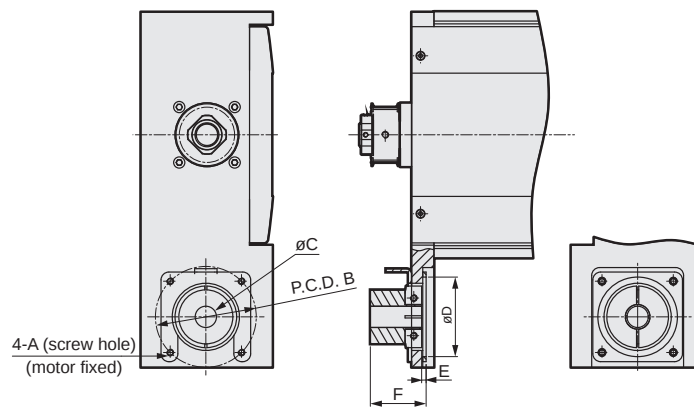
● ETS-22-*****-R

· Refer to page 158 for grease nipple dimensions.



Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532	1582	1632	1682	1732	1782	1832	1882
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	22.5	23.7	24.9	26.2	27.4	28.6	29.8	31.0	32.3	33.5	34.7	35.9	37.1	38.4	39.6	40.8	42.0	43.2	44.5	45.7	46.9	48.1	49.3	50.6	51.8	53.0	54.2	55.4	56.6	57.8

Motor mounting part



Mounted motor specification		A	B	C	D	E	F	Motor mounting bolt
M	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 × L16
Y	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 × L16
P	750 W	M5	ø90	ø19	ø71	4	49.8	4-M5 × L16
F	750 W	M6	ø100	ø14	ø81	8	53.8	4-M6 × L25

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt/pulley	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Included at shipment	750 W	M6	4
Y			M6	4
P			M5	4
F			M6	4

[Origin sensor/Limit sensor]

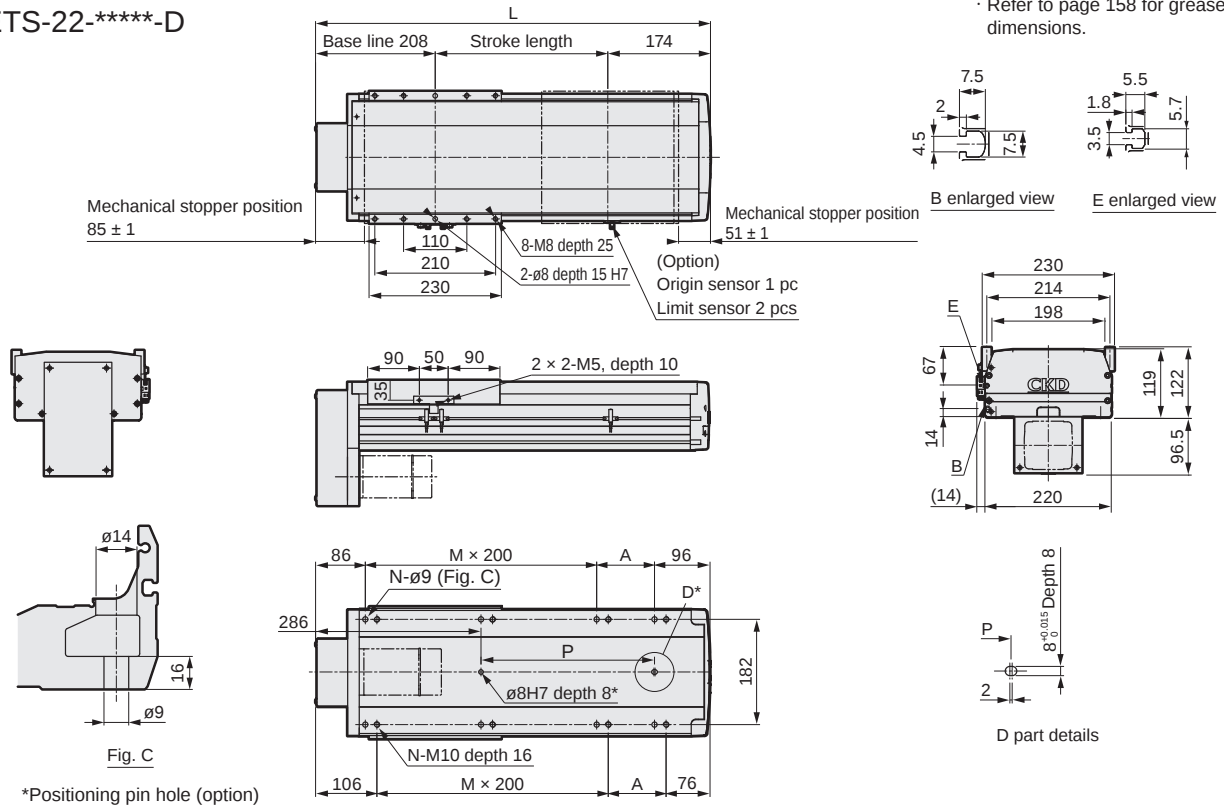
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Dimensions Motor bottom mounting

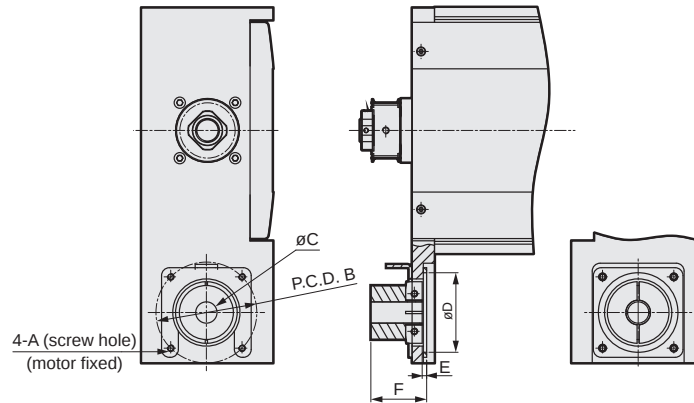
● ETS-22-*****-D

Refer to page 158 for grease nipple dimensions.



Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532	1582	1632	1682	1732	1782	1832	1882
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
Weight (kg)	22.4	23.6	24.8	26.1	27.3	28.5	29.7	30.9	32.2	33.4	34.6	35.8	37.0	38.3	39.5	40.7	41.9	43.1	44.4	45.6	46.8	48.0	49.2	50.5	51.7	52.9	54.1	55.3	56.5	57.7

Motor mounting part



Mounted motor specification		A	B	C	D	E	F	Motor mounting bolt
M	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 × L16
Y	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 × L16
P	750 W	M5	ø90	ø19	ø71	4	49.8	4-M5 × L16
F	750 W	M6	ø100	ø14	ø81	8	53.8	4-M6 × L25

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt/pulley	Motor capacity	Motor mounting bolt	
			Size	Quantity
M	Included at shipment	750 W	M6	4
Y			M6	4
P			M5	4
F			M6	4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 156 for sensor specifications.

Model selection

STEP 1 Confirming load capacity

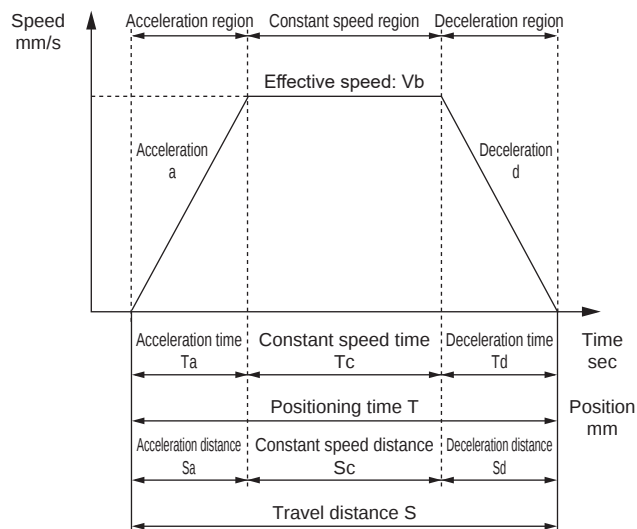
Load capacity varies with mounting orientation and screw lead.

Refer to the selection table (page 86) and the specification table for each model to select the size and screw lead.

STEP 2 Confirming positioning time

Calculate the positioning time of the selected product according to the following example and confirm that the required tact is achievable.

Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Description	Code	Unit	Remarks
Set value	Set speed	V	mm/s	
	Set acceleration	a	mm/s ²	
	Set deceleration	d	mm/s ²	
	Travel distance	S	mm	
Calculated value	Achieved speed	Vmax	mm/s	$= \{2 \times a \times d \times S / (a + d)\}^{1/2}$
	Effective speed	Vb	mm/s	Smaller of V and Vmax
	Acceleration time	Ta	s	$= Vb/a$ [0.2 sec or more]
	Deceleration time	Td	s	$= Vb/d$ [0.2 sec or more]
	Constant speed time	Tc	s	$= Sc/Vb$
	Acceleration distance	Sa	mm	$= (a \times Ta^2)/2$
	Deceleration distance	Sd	mm	$= (d \times Td^2)/2$
	Constant speed distance	Sc	mm	$= S - (Sa + Sd)$
	Positioning time	T	s	$= Ta + Tc + Td$

*Do not use at speeds that exceed the specifications.

*Acceleration/deceleration setting by acceleration/deceleration time varies with set speed and stroke length.

*Depending on acceleration/deceleration and stroke length, the trapezoid speed waveform may not be formed (the set speed may not be achieved). In this case, select the effective speed (Vb) from the set speed (V) and the achieved speed (Vmax), whichever is smaller.

*Use with acceleration time/deceleration time of 0.2 sec or longer.

*1 G $\approx$ 9.8 m/s².

STEP 3 Confirming allowable overhang length

Make sure that the load overhang length during operation is within the allowable range (pages 152 to 154).

For selection details, confirm with the CKD online model selection system, or contact CKD.

Introducing the online model selection system

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

[For confirmation via iPad or smartphone]



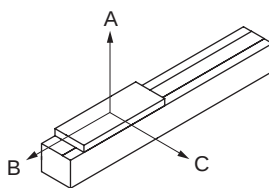
*Depending on your smartphone environment, it may not be displayed correctly.

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Allowable overhang length (ETS Series)

[When installed horizontally]



[Allowable overhang length]

● ETS-05

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	2	5	750	45	105
			10	350	20	47
			5	4	480	45
		10	7	300	25	55
			3	300	55	110
			5	180	30	65

● ETS-06 *1

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	2	10	400	65	150
			30	150	15	40
			10	520	50	110
		5	30	130	10	25
			3	800	145	330
			8	280	50	120
		10	15	140	23	55

● ETS-10 *2

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	30	560	50	50
			50	310	27	27
			15	440	90	90
		10	25	250	50	50
			30	200	40	40
			5	950	270	230
		16	10	480	130	110
			22	200	55	45
			5	750	250	200
		20	10	370	120	95
			15	240	80	60

● ETS-12 *3

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	30	900	70	80
			50	420	30	40
			15	900	150	160
		10	25	490	80	85
			30	400	60	70
			5	1700	430	450
		16	10	800	200	220
			22	330	80	85
			5	1200	420	400
		20	10	580	200	190
			15	370	120	120

● ETS-13 *4

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	40	800	65	230
			55	560	45	160
			70	430	34	120
		10	25	600	100	280
			35	420	70	195
			47	300	50	145
		16	10	900	230	520
			20	440	115	250
			30	280	75	170
		20	5	1200	430	850
			15	400	140	270
			24	250	85	160

*When suspending from above, use 1/3 of the static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length.
Use overhang length up to the center of gravity of the load within A, B and C directions.

*1: The numbers are the same for ETS-06 50 W.

*2: The numbers are the same for ETS-10 200 W.

*3: The numbers are the same for ETS-12 200 W and ETS-13 100 W.

*4: The numbers are the same for ETS-13 400 W.

● ETS-14 200W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	2300	250	240
			80	1600	180	170
			95	1150	145	140
		10	30	2000	500	450
			50	1400	280	250
			75	1000	170	160
		16	10	2200	1200	1000
			20	1600	600	500
			44	800	260	220
		20	10	2300	1200	1000
			20	1400	600	500
			35	1000	330	290

● ETS-14 400W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	2300	250	240
			80	1600	180	170
			110	1150	120	115
		10	30	2000	500	450
			50	1400	280	250
			88	700	140	125
		16	10	2200	1200	1000
			20	1600	600	500
			48	900	260	220
		20	10	2300	1200	1000
			20	1400	600	500
			40	850	280	230

● ETS-17 400W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	2950	400	475
			100	2000	220	265
			110	1850	200	240
		10	60	1600	350	400
			75	1350	270	320
			90	1050	220	230
		20	30	1850	650	650
			50	1100	380	380
			75	700	240	240
		40	10	1700	1150	900
			20	850	550	430
			35	450	300	240

● ETS-17 750W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	3300	410	470
			100	2000	230	260
			120	1700	180	210
		10	60	2300	400	440
			75	1850	310	350
			95	1450	230	270
		20	30	2000	650	620
			50	1150	370	370
			83	650	210	210
		40	10	1650	1150	850
			20	530	350	270
			50	300	190	150

● ETS-22

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	3600	650	650
			100	2800	350	340
			150	2300	260	230
		10	60	2850	960	810
			100	2000	570	460
			150	1450	340	310
		25	50	2000	850	610
			80	1200	500	360
			120	770	300	220
		40	10	4200	2850	1850
			30	1400	900	600
			60	650	420	270

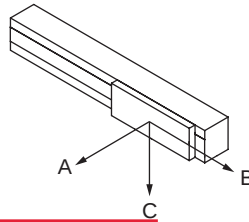
Discontinued some variations

Sales of ETS-05 to ETS-12 terminated.

ETS Series
Technical data

Allowable overhang length (ETS Series)

[When wall-mounted]



[Allowable overhang length]

● ETS-05

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	2	5	105	45	750
			10	47	20	350
			4	100	45	450
		5	7	55	23	240
			3	110	55	400
			5	60	30	230

● ETS-06 *1

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	2	15	110	42	400
			30	45	15	180
			5	240	95	1150
		5	10	115	50	540
			30	25	10	140
			3	320	150	700
		10	8	110	50	250
			15	50	25	120

● ETS-10 *2

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	10	160	160	1400
			20	75	75	650
			30	45	45	400
			10	130	140	690
			20	60	65	330
		10	30	40	40	210
			5	230	250	750
			10	110	120	370
		16	22	45	50	160
			5	220	250	650
			10	105	120	320
		20	15	65	75	210

● ETS-12 *3

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	10	330	270	2200
			20	145	120	1000
			30	90	70	600
			10	260	240	850
		10	20	115	110	520
			30	70	60	300
			5	450	450	1300
		16	10	210	210	600
			22	80	80	240
			5	410	410	1200
		20	10	190	195	600
			15	120	120	390

● ETS-13 *4

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	40	240	70	850
			55	170	50	600
			70	125	35	450
			25	300	100	620
		10	35	210	70	420
			47	150	50	300
			10	530	230	900
		16	20	250	110	430
			30	170	70	280
			5	900	450	1300
		20	15	290	150	420
			24	170	90	260

*When suspending from above, use 1/3 of the static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Use overhang length up to the center of gravity of the load within A, B and C directions.

*1: The numbers are the same for ETS-06 50 W.

*2: The numbers are the same for ETS-10 200 W.

*3: The numbers are the same for ETS-12 200 W and ETS-13 100 W.

*4: The numbers are the same for ETS-13 400 W.

● ETS-14 200W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	240	250	1600
			80	170	180	1200
			95	140	145	1050
			30	420	460	1500
		10	50	240	250	1000
			75	150	160	700
			10	1050	1200	2650
			20	500	620	1450
		16	44	230	270	800
			10	1000	1200	1900
			20	500	600	1000
			35	270	300	600

● ETS-14 400W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	240	250	1600
			80	170	180	1200
			110	115	120	1050
			30	420	460	1500
		10	50	240	250	1000
			88	120	130	700
			10	1050	1200	2650
			20	500	620	1450
		16	48	200	230	800
			10	1000	1200	1900
			20	500	600	1000
			40	230	290	600

● ETS-17 400W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	500	420	2450
			100	280	240	1600
			110	250	215	1400
			60	420	380	1950
			75	330	300	1500
			90	270	240	1200
		10	30	650	650	1600
			50	375	380	900
			75	245	240	600
			10	900	1100	1750
		20	20	450	550	850
			35	240	300	470
		40				

● ETS-17 750W

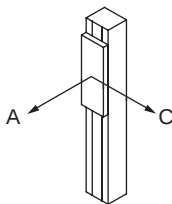
Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	500	430	2700
			100	280	240	1650
			120	230	200	1350
			60	420	380	2300
			75	330	300	1800
			95	250	230	1400
		10	30	640	650	1700
			50	370	380	1000
			83	210	210	560
			10	900	1150	1700
		20	20	280	350	550
			50	160	195	310
		40				

● ETS-22

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/bottom	0.2	5	60	940	1100	3850
			100	540	620	2450
			150	340	400	2150
			60	800	980	3700
			100	460	540	2200
			150	280	350	1450
		10	50	600	790	1950
			80	360	480	1200
			120	220	290	750
			10	1950	2900	3500
		25	30	620	950	1400
			60	290	430	650
		40				

Allowable overhang length (ETS Series)

[When installed vertically]



[Allowable overhang length]

● ETS-05

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	2	3	80
			7	35
		5	3	65
			10	120

● ETS-06 *1

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	2	5	160
			15	53
		5	2	300
			4	150
		10	6	60
			1	410
		20	2	205
			5	82

● ETS-10 *2

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	5	5	310
			10	155
			12	130
		10	4	360
			6	240
			8	180
		16	1	1050
			2	525
			5	210
		20	1	850
			2	425
			3	283

● ETS-12 *3

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	5	5	600
			10	300
			12	250
		10	4	650
			6	430
			8	320
		16	1	1050
			2	525
			5	210
		20	3	650
				700

● ETS-13 *4

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	5	5	600
			10	300
			12	250
		10	4	650
			6	430
			8	320
		16	1	1350
			2	900
			6	350
		20	1	1050
			2	900
			4	550

*When suspending from above, use 1/3 of the static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Use overhang length up to the center of gravity of the load within A, B and C directions.

*1: The numbers are the same for ETS-06 50 W.

*2: The numbers are the same for ETS-10 200 W.

*3: The numbers are the same for ETS-12 200 W and ETS-13 100 W.

*4: The numbers are the same for ETS-13 400 W.

● ETS-14 200W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	5	20	755
			25	605
			27	560
		10	10	1350
			15	900
			18	750
		16	2	2400
			4	1700

● ETS-14 400W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	5	20	755
			25	605
			33	455
		10	10	1350
			15	900
			22	650
		16	2	2400
			4	1700
			10	1000
		20	4	1800
			6	1200
			8	900

● ETS-17 400W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	5	20	1400
			30	950
			40	700
		10	15	1700
			25	1000
			30	850
		20	5	2000
			10	1800
			14	1400
		40	7	650

● ETS-17 750W

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	5	20	1500
			30	1000
			50	600
		10	15	1700
			25	1000
			40	620
		20	5	2200
			10	1900
			25	730
		40	10	700

● ETS-22

Motor mounted	Acceleration/deceleration time sec	Screw lead	Weight kg	Overhang mm
Straight / side/bottom	0.2	5	30	2400
			50	1450
			55	1050
		10	20	3000
			30	2000
			45	1350
		25	15	2600
			20	1950
			25	1550
		40	5	2600
			10	1950

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

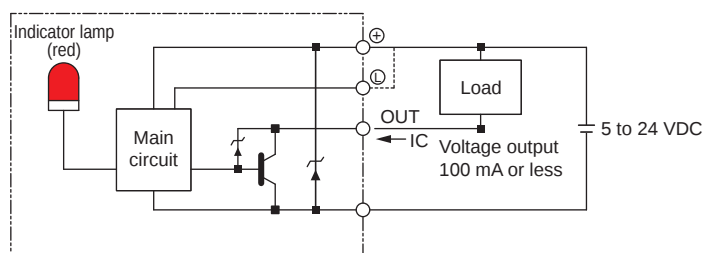
Origin sensor, limit sensor

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

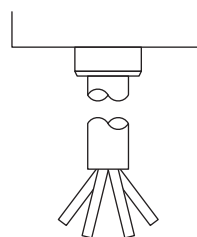
Performance

Item	Specifications
Hysteresis	0.025 mm or less
Light source (peak emission wavelength)	GaAs infrared LED (940 nm)
Indicator lamp	ON when receiving light (red)
Power supply voltage	5 to 24 VDC $\pm 10\%$ ripple (P-P) 10% or less
Current consumption	35 mA or less (NPN)
Control output	NPN: NPN open collector output 5 to 24 VDC 100 mA or less OFF state current 0.5 mA or less Residual voltage 0.8 V or less (at load current 100 mA) Residual voltage 0.4 V or less (at load current 40 mA)
Operating ambient illumination	Light-receiving surface luminance Fluorescent light: 1,000 lx or less
Ambient temperature range	When operating: -25 to +55°C When stored: -30 to +80°C (no condensation or freezing)
Ambient humidity range	When operating: 5 to 85% RH When stored: 5 to 95% RH (no condensation or freezing)
Degree of protection	IP50 IEC 60529 Standards
Cord length	2 m (Connector with cord [EE-1006 2M])

Output circuit



Wiring diagram



Terminal layout

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Discontinued some variations

Sales of ETS-05 to ETS-12 terminated.

ETS Series
Technical data

Sensor dog dimensions

Motor mounting direction		Motor mounting direction					
Body size	E/D/R/L	Body size	E/D/B	R		L	
				Grease nipple None	Grease nipple Yes	Grease nipple None	Grease nipple Yes
ETS-05	Fig. 1	ETS-10	Fig. 3	Fig. 3		Fig. 3	
ETS-06	Fig. 2	ETS-12	Fig. 3	Fig. 3	Fig. 4	Fig. 3	Fig. 4

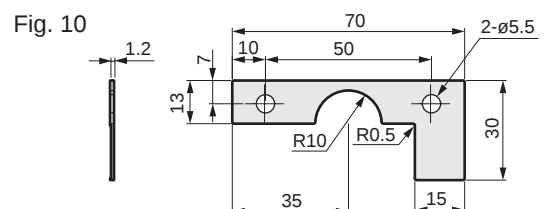
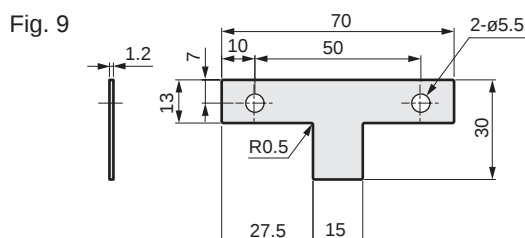
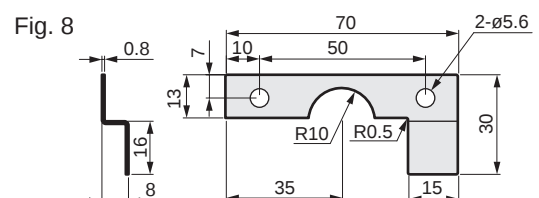
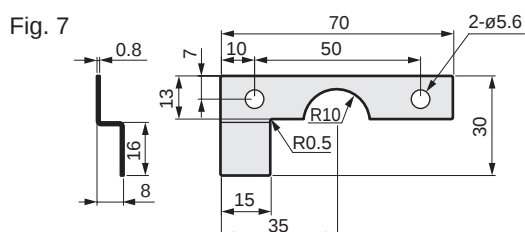
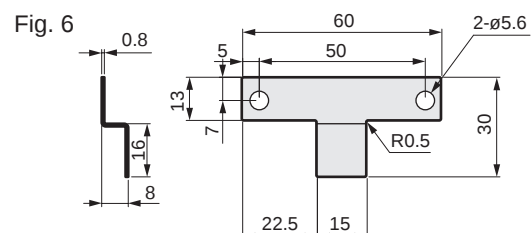
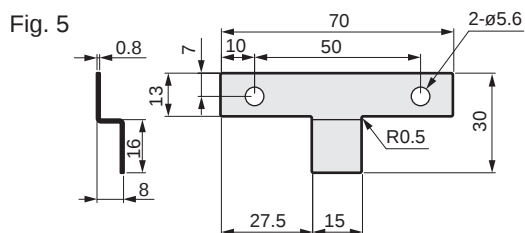
Fig. 1

Fig. 2

Fig. 3

Fig. 4

Motor mounting direction					
Body size	E/D/B	R		L	
		Grease nipple None	Grease nipple Yes	Grease nipple None	Grease nipple Yes
ETS-13	Fig. 5	Fig. 5	Fig. 6	Fig. 5	Fig. 6
ETS-14	Fig. 5	Fig. 5	Fig. 7	Fig. 5	Fig. 8
ETS-17	Fig. 5	Fig. 5	Fig. 7	Fig. 5	Fig. 8
ETS-22	Fig. 9	Fig. 9	Fig. 10	Fig. 9	Fig. 10



Servo motor compatible

Stepper motor compatible

Safety
precautions

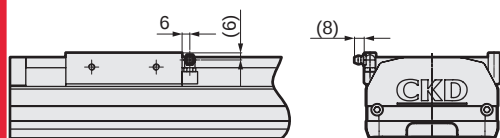
Discontinued some variations

ETS Series Sales of ETS-05 to ETS-12 terminated.

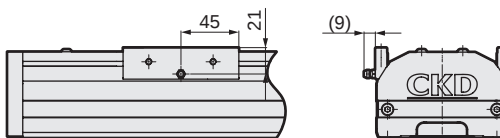
Grease nipple dimensions

*Horizontally symmetrical against the actuator.

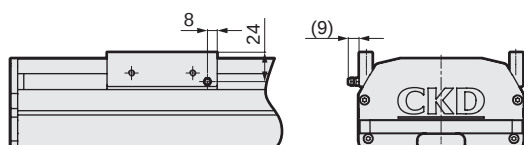
● ETS-10



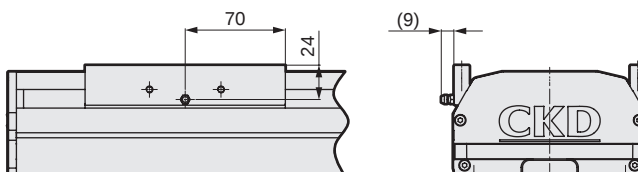
● ETS-12



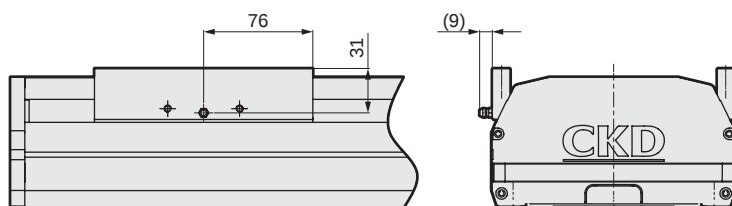
● ETS-13



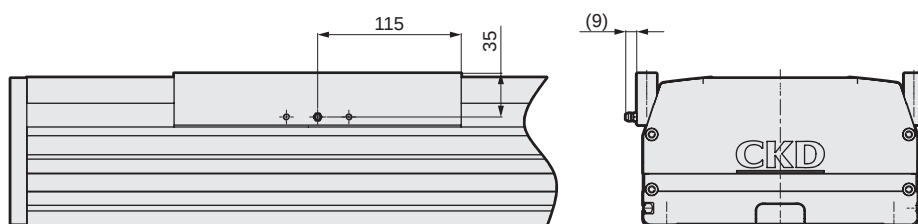
● ETS-14



● ETS-17



● ETS-22



Servo motor compatible

ETS Multi-Axis

ECS

ETV

ECV

EKS

Stepper motor compatible

EBS

EBR

ETS

ECS

Safety precautions

Discontinued some variations

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

List of attachments

Basic

Motor mounting bolt (common motor mounting direction)

Model No.	Mounted motor specification	Motor capacity	Size	Quantity
ETS-05	M	100 W	M4	2
	Y		M4	2
	P		M3	4
	F		M4	2
ETS-06	M	50 W/100 W	M4	2
	Y		M4	2
	P		M3	4
	F		M4	2
ETS-10 ETS-12	M	100 W/200 W	M4/M5	2/4
	Y		M4/M5	2/4
	P		M3/M4	4
	F		M4/M5	2/4
ETS-13	M	100 W/200 W/400 W	M4/M5/M5	2/4/4
	Y		M4/M5/M5	2/4/4
	P		M3/M4/M4	4
	F		M4/M5/M5	2/4/4
ETS-14	M	200 W/400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
ETS-17	M	400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
	M	750 W	M6	4
ETS-22	Y		M6	4
	P		M5	4
	F		M6	4

By motor mounting direction

Model No.	Attachment name	Quantity
E (external direct mounting) B (built-in)	Coupling (assembled at shipment)	1
R (right-side mounting) L (left-side mounting)	Timing belt	1
D (bottom mounting)	Pulley	1

When origin/limit sensor is selected *1

Sensor mounting direction	Shipping format	Quantity
Inside sensor	Fixed position assembled at shipment	3 *2
Outside sensor	Included at shipment *3	

*1 Shipping format varies according to whether origin sensor and limit sensor are assembled inside or outside.

*2 When "None" is selected for origin sensor or limit sensor, the other sensor is also "None".

*3 Sensor mounting screws are also included.

Discontinued some variations

Sales of ETS-05 to ETS-12 terminated.

ETS Series
Maintenance parts

Maintenance parts

● Maintenance parts set

Model No.	Compatibility	Components			
		(1)	(2)	(3)	(4)
		Timing belt 	Pulley 	Sensor dog 	Photoelectric bracket 
ETS-08JP002-0001	ETS-05	○ (1 pc)	○ (1 pc)	○ (1 pc)	-
ETS-08JP002-0002	ETS-06	○ (2 pcs)	○ (1 pc)	○ (1 pc)	-
ETS-08JP002-0003	ETS-10	○ (3 pcs)	○ (2 pcs)	○ (1 pc)	○ (4 pcs)
ETS-08JP002-0004	ETS-12	○ (2 pcs)	○ (2 pcs)	○ (1 pc)	○ (4 pcs)
ETS-08JP002-0005	ETS-13, 14	○ (2 pcs)	○ (3 pcs)	○ (1 pc)	-
ETS-08JP002-0007	ETS-17	○ (4 pcs)	○ (2 pcs)	○ (1 pc)	-
ETS-08JP002-0008	ETS-22	○ (3 pcs)	○ (2 pcs)	○ (1 pc)	-

*Contact CKD regarding maintenance parts for metal stopper specifications (ETS-X).

● Maintenance parts (coupling)

Model No. 	Compatibility	Motor capacity	Hole diameter
ETS-22007-000136	ETS-05, 06	100 W	ø8
ETS-22007-000014	ETS-10, 12	100 W	ø8
ETS-22007-000289	ETS-10, 12, 13, 14 (Mounted motor specification: F)	200 W	ø9
ETS-22007-000016	ETS-10, 12, 13, 14 (Mounted motor specification: P)	200 W	ø11
ETS-22007-000017	ETS-10, 12, 13, 14 (Mounted motor specification: M, Y)	200 W/400 W	ø14
ETS-22007-000022	ETS-17 (Mounted motor specification: P)	400 W	ø14
ETS-22007-000358	ETS-17 (Mounted motor specification: F)	750 W	ø14
ETS-22007-000397	ETS-22 (Mounted motor specification: F)	750 W	ø14
ETS-22007-000024	ETS-17 (Mounted motor specification: M, Y)	750 W	ø19
ETS-22007-000029	ETS-22 (Mounted motor specification: M, Y, P)	750 W	ø19

● Maintenance parts (outside mounted sensor)

Basic price model No. 	Compatibility	Part
ETS-22008-000001	All models	Body
ETS-22008-000006		Cable

EBS
EBR
ETS
ETS Multi-Axis
ECS
ETV
ECV
EKS
EBS
EBR
ETS
ECS

Stepper motor compatible

Safety
precautions

Discontinued some variations

Stepper motor compatible				Servo motor compatible						
ECS	ETS	EBR	EBS	EKS	ECV	ETV	ECS	ETS Multi-Axis	ETB	EBS

Safety precautions

Discontinued some variations

ETS Multi-Axis

Electric actuator
Servo motor compatible
Motorless specifications

Ball screw drive

Sales of ETS-210A,
430A, 440A, 530F,
640F, 760G, 870G
discontinued.



CONTENTS

Product introduction	Intro Page
● 2-axis combination table	164
● 2-axis combination load capacity table	165
● X-Y axes (A type)	166
● X-Y axes/with support guide (G type)	204
● X-Z axes (P type)	218
● Y-Z axes (F type)	232
● Combination parts	246
⚠ Safety precautions	686
Model selection check sheet	709

EBS

EBR

ETS

Servo motor compatible
ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

Stepper motor compatible
EBR

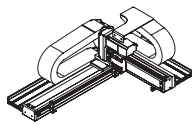
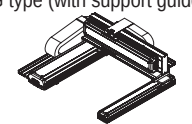
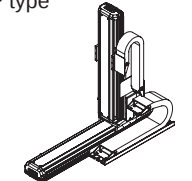
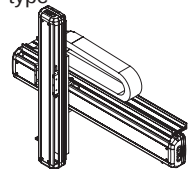
ETS

ECS

Safety
precautions

Series variation

Combinations of multiple axes * Set model No. Check the following table for combinations of axes.
[2-axis combination]

Specifications	Set model No.	Combination	1st axis	2nd axis	1st axis stroke	2nd axis stroke	Page
 A type	ETS-210	A	ETS-06-10	ETS-05-10	100 to 800	50 to 350	166
	ETS-430	A	ETS-12-20	ETS-10-20	100 to 1050	50 to 550	
	ETS-440	A	ETS-12-20	ETS-12-20	100 to 1050	50 to 550	
	ETS-650	A	ETS-14-20	ETS-13-20	100 to 1050	50 to 650	
	ETS-760	A	ETS-17-20	ETS-14-20	100 to 1250	50 to 650	
	ETS-870	A	ETS-22-25	ETS-17-20	100 to 1500	50 to 750	
 G type (with support guide)	ETS-760	G	ETS-17-20	ETS-14-20	100 to 1250	200 to 850	204
	ETS-870	G	ETS-22-25	ETS-17-20	100 to 1500	200 to 1050	
 P type	ETS-650	P	ETS-14-20	ETS-13-10	100 to 1050	50 to 550	218
	ETS-760	P	ETS-17-20	ETS-14-10	100 to 1250	50 to 650	
	ETS-880	P	ETS-22-25	ETS-22-05	100 to 1500	50 to 950	
 F type	ETS-530	F	ETS-13-20	ETS-10-10	100 to 1050	50 to 350	232
	ETS-640	F	ETS-14-20	ETS-12-10	100 to 1050	50 to 350	
	ETS-760	F	ETS-17-20	ETS-14-10	100 to 1250	50 to 550	

List of servo motors recommended for mounting

Code	Manufacturer	Series	100 W *2 (ETS-05/06/10/12/13 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR13
		MELSERVO J5	HK-KT_13W
M	Delta Electronics Co., Ltd.	ECMA-C *1	ECMA-C10401
M	Sanyo Corporation, Ltd.	SANMOTION R	R2□A04010
Y	YASKAWA Electric Corporation	Σ-V	SGMJV-01
Y	Keyence Corporation	SV	SV-□010
P	Panasonic Corporation	MINAS A5	MSMD01
O	OMRON Corporation	G5	R88M-K10030

Code	Manufacturer	Series	200 W *2 *3 (ETS-10/12/13/14 Series)	400 W (ETS-13/14/17 Series)	750 W *4 (ETS-17/22 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT_23W	HK-KT_43W	HK-KT_7M3W
M	Delta Electronics Co., Ltd.	ECMA-C *1	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Corporation, Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	YASKAWA Electric Corporation	Σ-V	SGMJV-02	SGMJV-04	SGMJV-08
Y	Keyence Corporation	SV	SV-□020	SV-□040	SV-□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
O	OMRON Corporation	G5	R88M-K20030	R88M-K40030	R88M-K75030

*Contact CKD for mounting other than the above motors and products of other motor manufacturers.

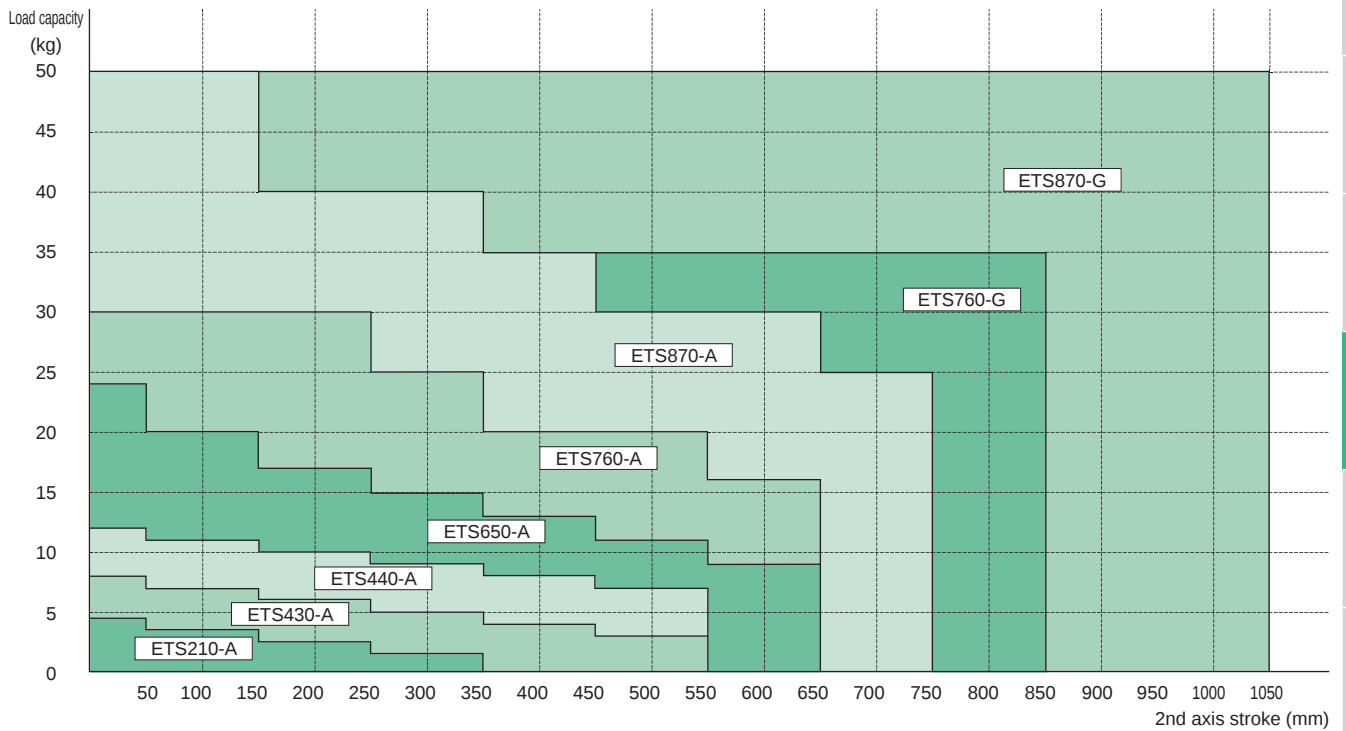
*1: ECMA series (with brake) cannot be used with built-in mounting.

*2: Contact CKD when using an OMRON motor with ETS-12 built-in mounting.

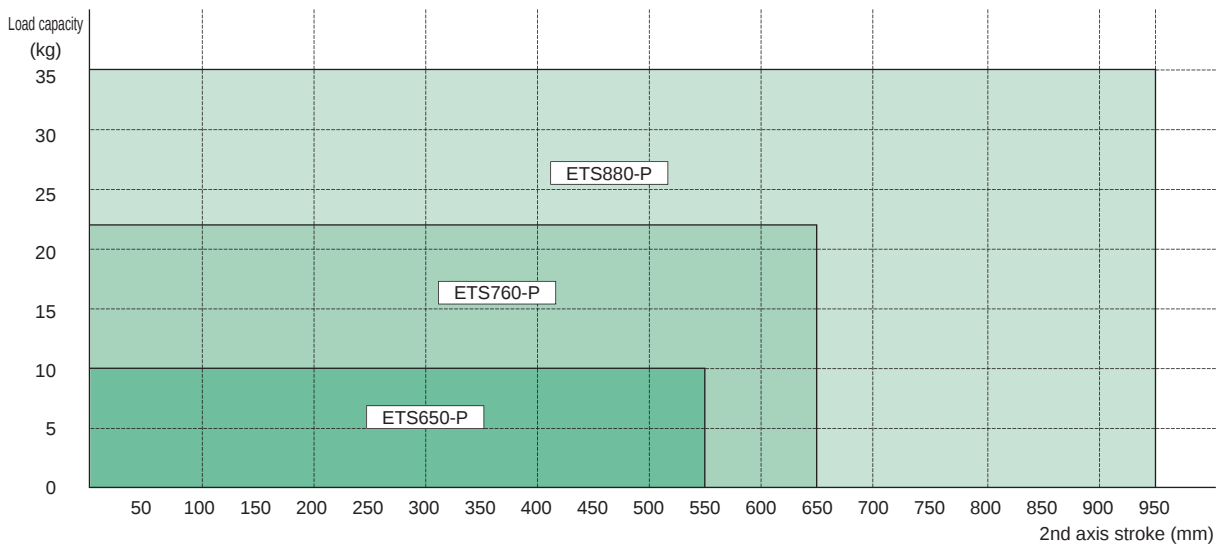
*3: ETS-10 and 12 200 W cannot be used with built-in mounting. *4: ETS-17 750 W cannot be used with built-in mounting.

2-axis combination load capacity

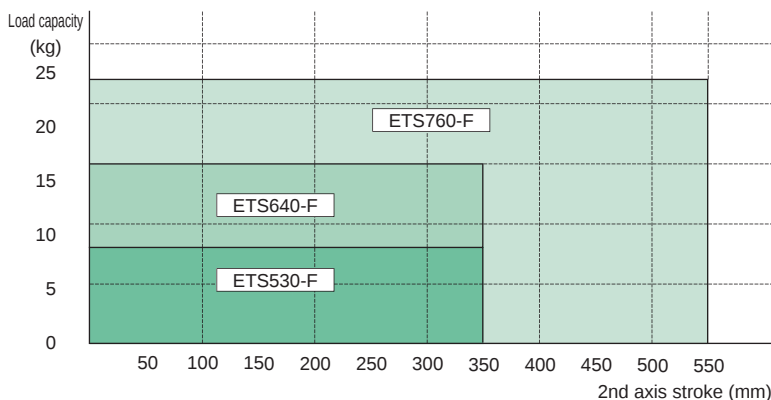
■ X-Y axes (A type/G type)



■ X-Z axes (P type)



■ Y-Z axes (F type)



Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis Series

- Servo motor capacity: 100 W/200 W/400 W/750 W
- 2-axis combination X-Y axes (A type)

RoHS

Sales of ETS-210A, 430A, 440A terminated.

How to order

ETS - 210 A 1 - 040 030 - M N W

A Combined axes	
210	ETS-06 × ETS-05
430	ETS-12 × ETS-10
440	ETS-12 × ETS-12
650	ETS-14 × ETS-13
760	ETS-17 × ETS-14
870	ETS-22 × ETS-17

B Combination	
A	X-Y axes

C Combination direction	
1 to 4	Confirm the table below.

D 1st axis stroke	
010	100 mm to (50 mm pitch)
150	1500 mm

E 2nd axis stroke	
005	50 mm to (50 mm pitch)
075	750 mm

G Brake *1	
N	None

H Origin/Limit sensor (3 pcs × 2 axes) *2	
N	None
W	Yes

F Mounted motor specification *3	
M	Select the mounted motor specification from the table below.
Y	
P	
O	

F Mounted motor specification

Manufacturer	100 W	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M	M
Delta Electronics Co., Ltd.	M	M	M	M
Sanyo Denki Co., Ltd.	M	M	M	-
YASKAWA Electric Corporation	Y	Y	Y	Y
Keyence Corporation	Y	Y	Y	Y
Panasonic Corporation	P	P	P	P
OMRON Corporation	O	O	O	O

*1: The brake targets the 2nd axis.

*2: The user can adjust the sensor position. (Included at shipment)

*3: When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

*Refer to page 164 for the motor model No.

C Combination direction

A1	A2	A3	A4

Discontinued some variations

ETS Multi-Axis Series

Sales of ETS-210A, 430A, 440A terminated.

Specifications (X-Y axes)

Axis combination specifications

Combination direction and motor mounting direction

Combined axes	Combination	Combination direction	Motor mounting direction and motor capacity										
			1st axis					2nd axis					
			Model	100 W	200 W	400 W	750 W	Model	100 W	200 W	400 W	750 W	
ETS-210	A	1	ETS-06	E	-	-	-	ETS-05	R	-	-	-	
		2		E	-	-	-		L	-	-	-	
		3		E	-	-	-		L	-	-	-	
		4		E	-	-	-		R	-	-	-	
ETS-430	A	1	ETS-12	B	-	-	-	ETS-10	R	-	-	-	
		2		B	-	-	-		L	-	-	-	
		3		B	-	-	-		L	-	-	-	
		4		B	-	-	-		R	-	-	-	
ETS-440 *1	A	1	ETS-12	B	-	-	-	ETS-12	R	-	-	-	
		2		B	-	-	-		L	-	-	-	
		3		B	-	-	-		L	-	-	-	
		4		B	-	-	-		R	-	-	-	
ETS-650	A	1 to 4	ETS-14	-	-	B	-	ETS-13	-	B	-	-	
ETS-760	A	1 to 4	ETS-17	-	-	B	-	ETS-14	-	B	-	-	
ETS-870	A	1 to 4	ETS-22	-	-	-	B	ETS-17	-	-	B	-	

*E: Straight mount B: Built-in mount R: Right side mount L: Left side mount

*Motor mounting direction is determined by combination direction.

*1: Contact CKD when using an OMRON motor.

stroke length

Combined axes	Combination	1st axis			2nd axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-210	A	ETS-06	10	100 to 800	ETS-05	10	50 to 350
ETS-430		ETS-12	20	100 to 1050	ETS-10	20	50 to 550
ETS-440		ETS-12	20	100 to 1050	ETS-12	20	50 to 550
ETS-650	A	ETS-14	20	100 to 1050	ETS-13	20	50 to 650
ETS-760		ETS-17	20	100 to 1250	ETS-14	20	50 to 650
ETS-870		ETS-22	25	100 to 1500	ETS-17	20	50 to 750

Grease nipple

Combined axes	Combination	Combination direction	1st axis		2nd axis		Combined axes	Combination	Combination direction	1st axis		2nd axis	
			Model	Grease nipple position	Model	Grease nipple position				Model	Grease nipple position	Model	Grease nipple position
ETS-210	A	1	ETS-06	-	ETS-05	-	ETS-650	A	1	ETS-14	L	ETS-13	R
		2							2		L		L
		3							3		R		L
		4							4		R		R
ETS-430	A	1	ETS-12	L	ETS-10	R	ETS-760	A	1	ETS-17	L	ETS-14	R
		2		L		L			2		L		L
		3		R		L			3		R		L
		4		R		R			4		R		R
ETS-440	A	1	ETS-12	L	ETS-12	R	ETS-870	A	1	ETS-22	L	ETS-17	R
		2		L		L			2		L		L
		3		R		L			3		R		L
		4		R		R			4		R		R

*The grease nipple is not attached for ETS-05 and 06.

R: Right side L: Left side

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis series

- Servo motor capacity: 400 W/200 W
- 2-axis combination X-Y axes (A type)

RoHS

How to order

ETS - 650 A 1 - 040 030 - M N W

A Combined axes
650 ETS-14 × ETS-13

B Combination
A X-Y axes

C Combination direction
1 to 4 Confirm the table below.

D 1st axis stroke
010 100 mm to (50 mm pitch)
105 1050 mm

E 2nd axis stroke
005 50 mm to (50 mm pitch)
065 650 mm

G Brake *1
N None

H Origin/Limit sensor (3 pcs × 2 axes) *2
N None
W Yes

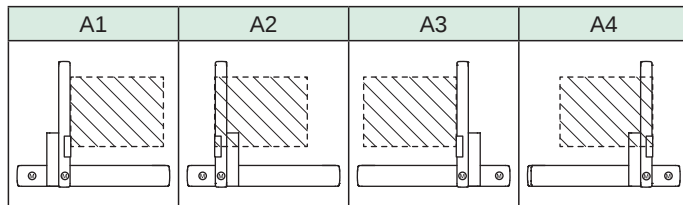
F Mounted motor specification *3
M Select the mounted motor specification from the table below.
Y
P
O

*1: The brake targets the 2nd axis.

*2: The user can adjust the sensor position. (Included at shipment)

*3: When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

C Combination direction



F Mounted motor specification

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics Co., Ltd.	M	M
Sanyo Denki Co., Ltd.	M	M
YASKAWA Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	O	O

*Refer to page 164 for the recommended motor model No.

C Combination direction and motor mounting direction

Combined axes	Combination	Combination direction	Motor mounting direction and motor capacity			
			1st axis		2nd axis	
			Model	400 W	Model	200 W
ETS-650	A	1	ETS-14	B	ETS-13	B
		2		B		B
		3		B		B
		4		B		B

*B: Built-in mount

D E stroke length

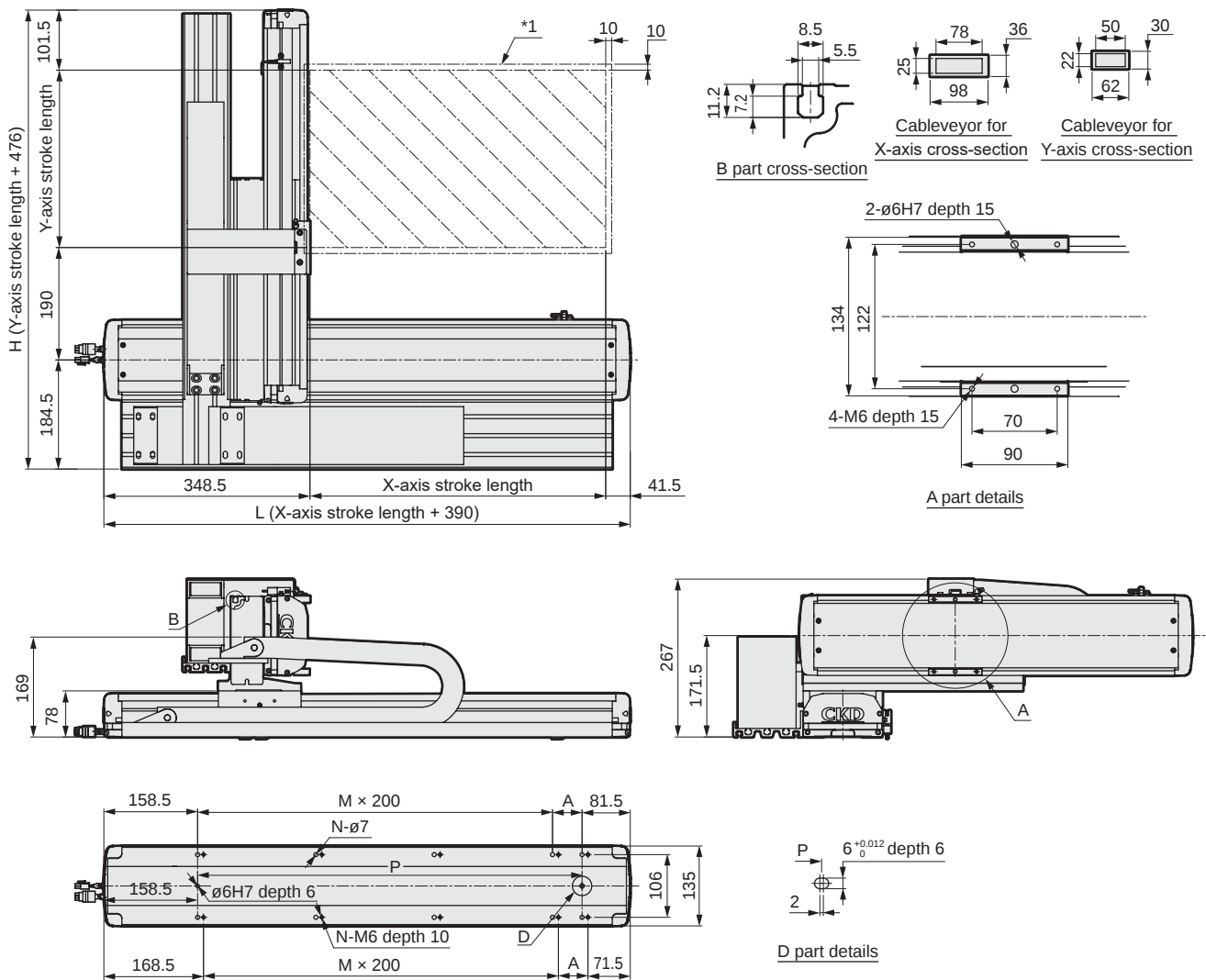
Combined axes	Combination	1st axis			2nd axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-650	A	ETS-14	20	100 to 1050	ETS-13	20	50 to 650

Grease nipple

Combined axes	Combination	Combination direction	1st axis		2nd axis	
			Model	Grease nipple position	Model	Grease nipple position
ETS-650	A	1	ETS-14	L	ETS-13	R
		2		L		L
		3		R		L
		4		R		R

Dimensions

● ETS-650A1



*1: Stops within the moving range and this range when returning to origin.

*This figure shows the dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000														900	800	700	600	500	400
Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650							
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126							
Max. working speed (mm/s)	1000																			
Max. load capacity (kg)	24	20		17		15		13		11		9								

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-14	M	B	Coupling	Assembled at shipment	400 W	M5 4
ETS-13	Y				200 W	M5 4
	P					M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

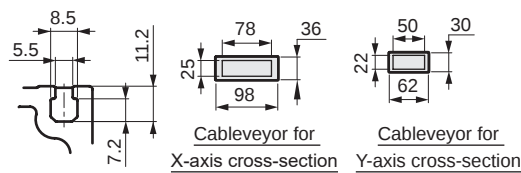
Cableveyor, axis combination bracket

Discontinued some variations

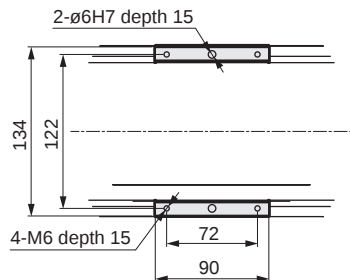
ETS Multi-Axis Series

Dimensions

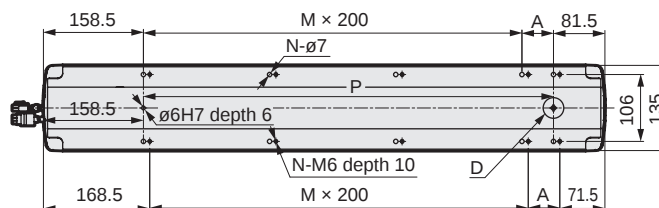
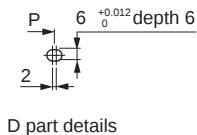
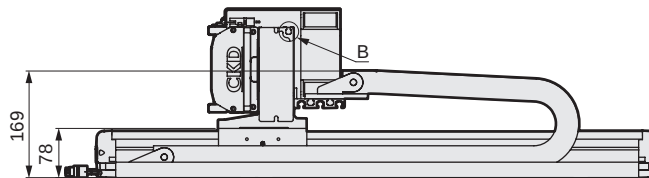
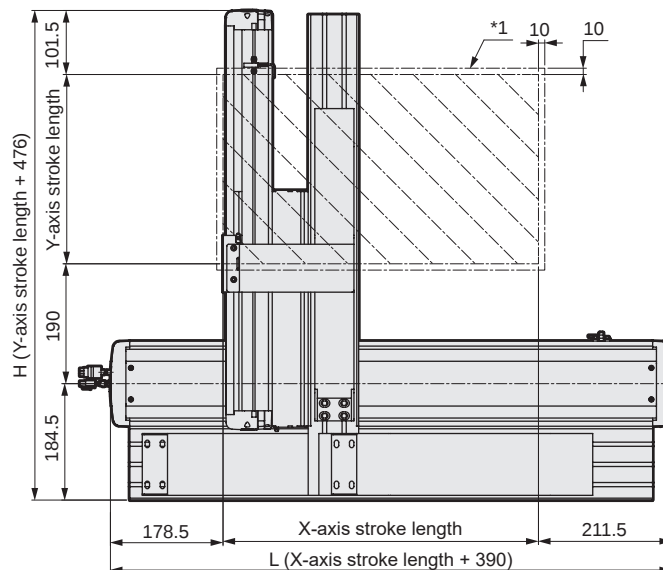
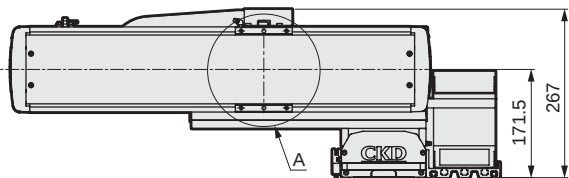
● ETS-650A2



B part cross-section



A part details



*1: Stops within the moving range and this range when returning to origin.

*This figure shows the dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000															900	800	700	600	400

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
Max. working speed (mm/s)	1000												
Max. load capacity (kg)	24	20	17	15	13	11	9						

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-14	M	B	Coupling	Assembled at shipment	400 W	M5 4
ETS-13	Y				200 W	M5 4
	P					M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

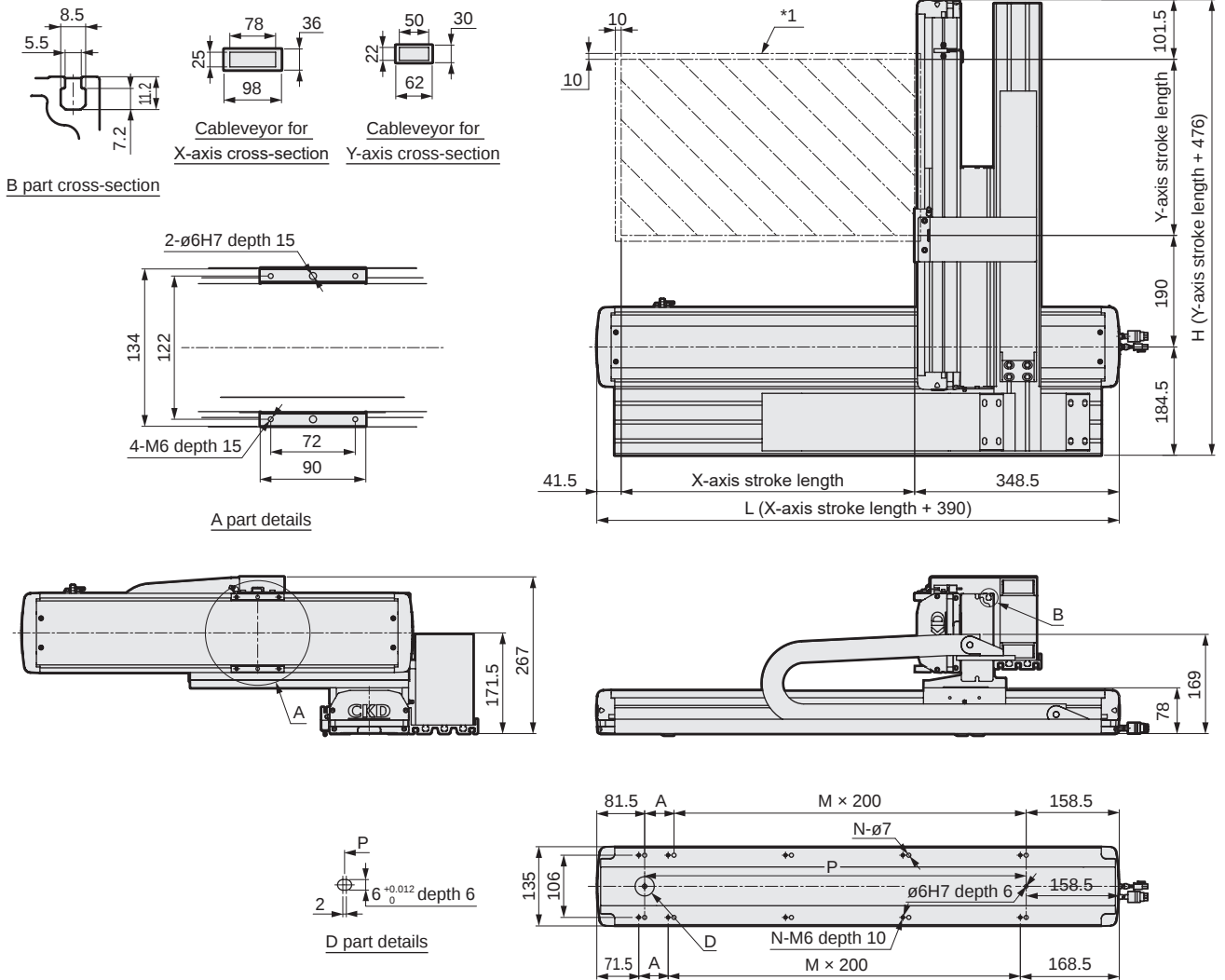
Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

● ETS-650A3



*1: Stops within the moving range and this range when returning to origin.

*This figure shows the dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000															900	800	700	600	500

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
Max. working speed (mm/s)	1000												
Max. load capacity (kg)	24	20	17	15	13	11	9						

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-14	M	B	Coupling	Assembled at shipment	400 W	M5 4
ETS-13	Y				200 W	M5 4
	P					M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

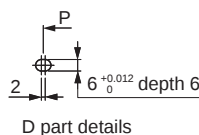
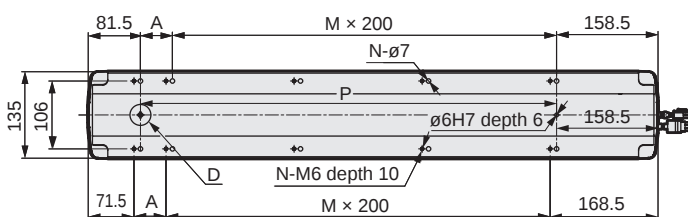
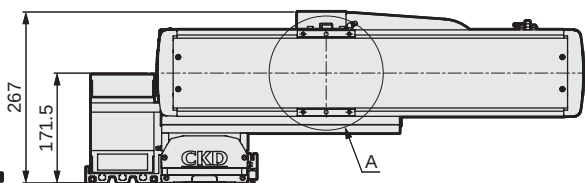
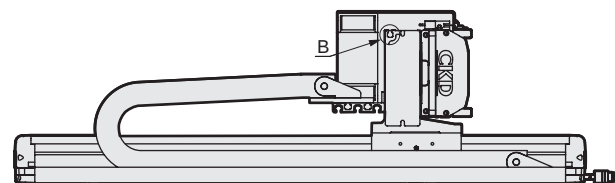
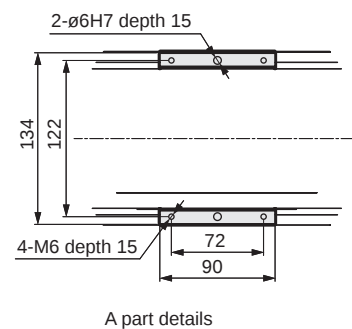
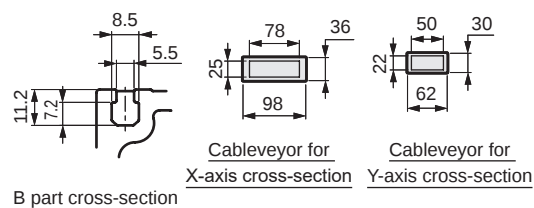
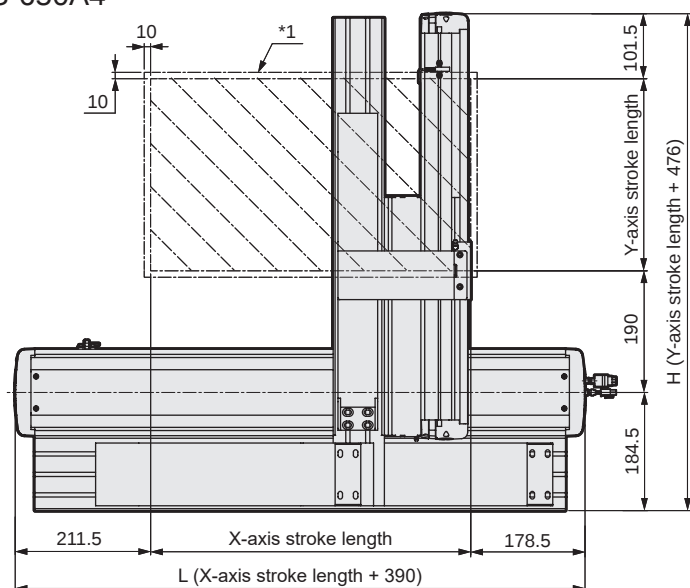
Cableveyor, axis combination bracket

Discontinued some variations

ETS Multi-Axis Series

Dimensions

● ETS-650A4



*1: Stops within the moving range and this range when returning to origin.

*This figure shows the dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000														900	800	700	600	500	400
Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650							
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126							
Max. working speed (mm/s)	1000																			
Max. load capacity (kg)	24	20	17	15	13	11	9													

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-14	M	B	Coupling	Assembled at shipment	400 W	M5 4
ETS-13	Y				200 W	M5 4
	P					M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis series

- Servo motor capacity: 400 W/200 W
- 2-axis combination X-Y axes (A type)

RoHS

How to order

ETS - 760 A 1 - 040 030 - M N W

A Combined axes
760 ETS-17 × ETS-14

B Combination
A X-Y axes

C Combination direction
1 to 4 Confirm the table below.

D 1st axis stroke
010 100 mm to (50 mm pitch)
125 1250 mm

E 2nd axis stroke
005 50 mm to (50 mm pitch)
065 650 mm

G Brake *1
N None

H Origin/Limit sensor (3 pcs × 2 axes) *2
N None
W Yes

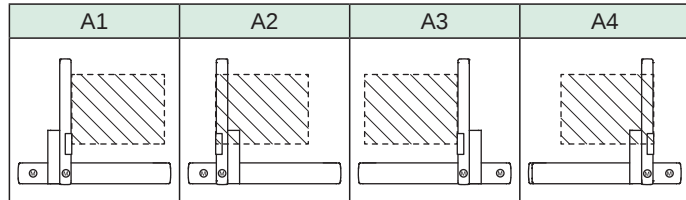
F Mounted motor specification *3
M Select the mounted motor specification from the table below.
Y
P
O

*1: The brake targets the 2nd axis.

*2: The user can adjust the sensor position. (Included at shipment)

*3: When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

C Combination direction



F Mounted motor specification

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics Co., Ltd.	M	M
Sanyo Denki Co., Ltd.	M	M
YASKAWA Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	O	O

*Refer to page 164 for the recommended motor model No.

C Combination direction and motor mounting direction

Combined axes	Combination	Combination direction	Motor mounting direction and motor capacity			
			1st axis		2nd axis	
			Model	400 W	Model	200 W
ETS-760	A	1	ETS-17	B	ETS-14	B
		2		B		B
		3		B		B
		4		B		B

*B: Built-in mount

D E stroke length

Combined axes	Combination	1st axis			2nd axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-760	A	ETS-17	20	100 to 1250	ETS-14	20	50 to 650

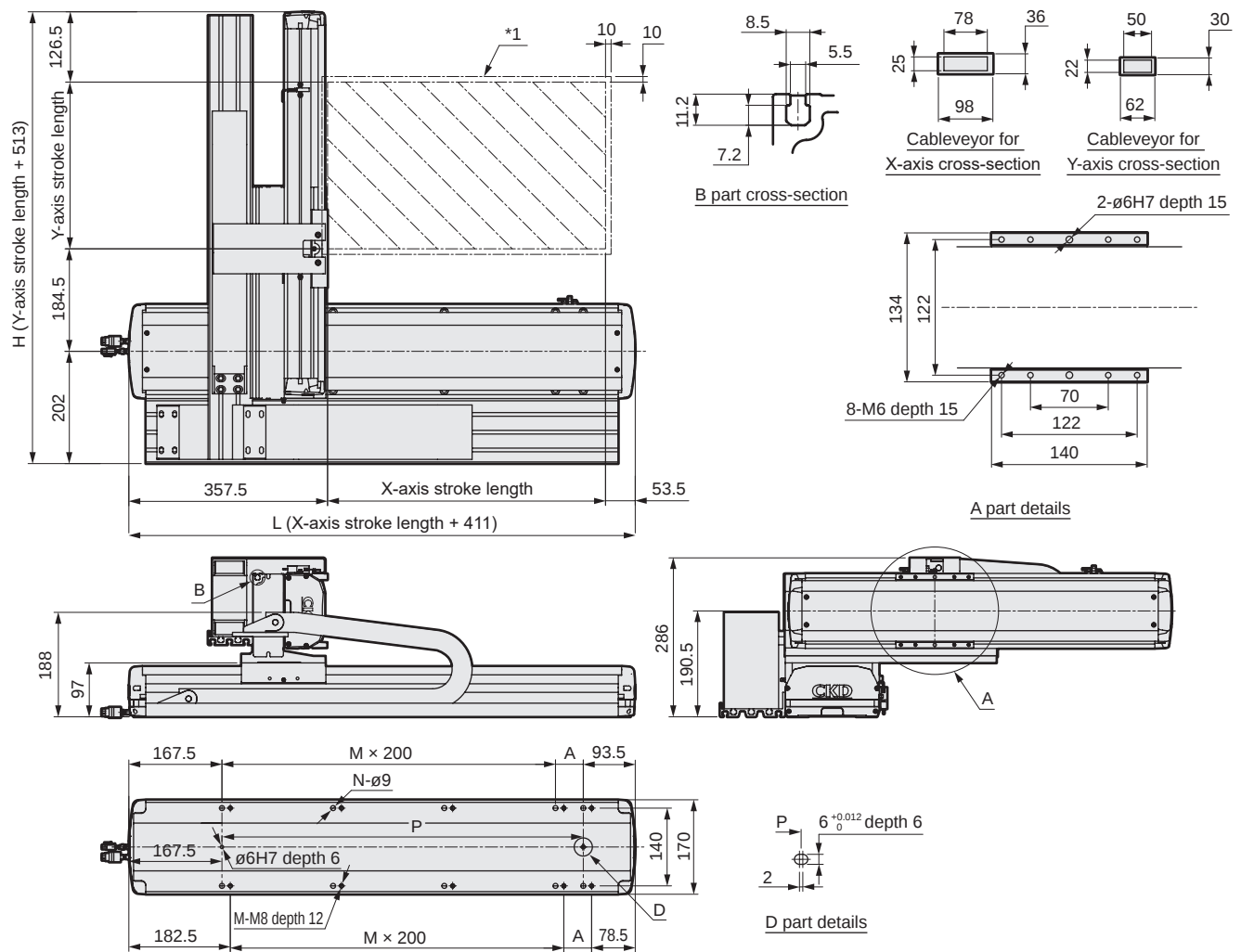
Grease nipple

Combined axes	Combination	Combination direction	1st axis		2nd axis	
			Model	Grease nipple position	Model	Grease nipple position
ETS-760	A	1	ETS-17	L	ETS-14	R
		2		L		L
		3		R		L
		4		R		R

*R: Right side L: Left side

Dimensions

● ETS-760A1



*1: Stops within the moving range and this range when returning to origin.

*This figure shows the dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000																900	800		

X-axis stroke (mm)	1100	1150	1200	1250
L	1511	1561	1611	1661
A	50	100	150	200
M	6	6	6	6
N	16	16	16	16
P	1250	1300	1350	1400
Max. working speed (mm/s)	700	600		

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
Max. working speed (mm/s)	1000												
Max. load capacity (kg)	30					25			20			16	

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-17	M	B	Coupling	Assembled at shipment	400 W	M5 4
	Y					M5 4
ETS-14	P				200 W	M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

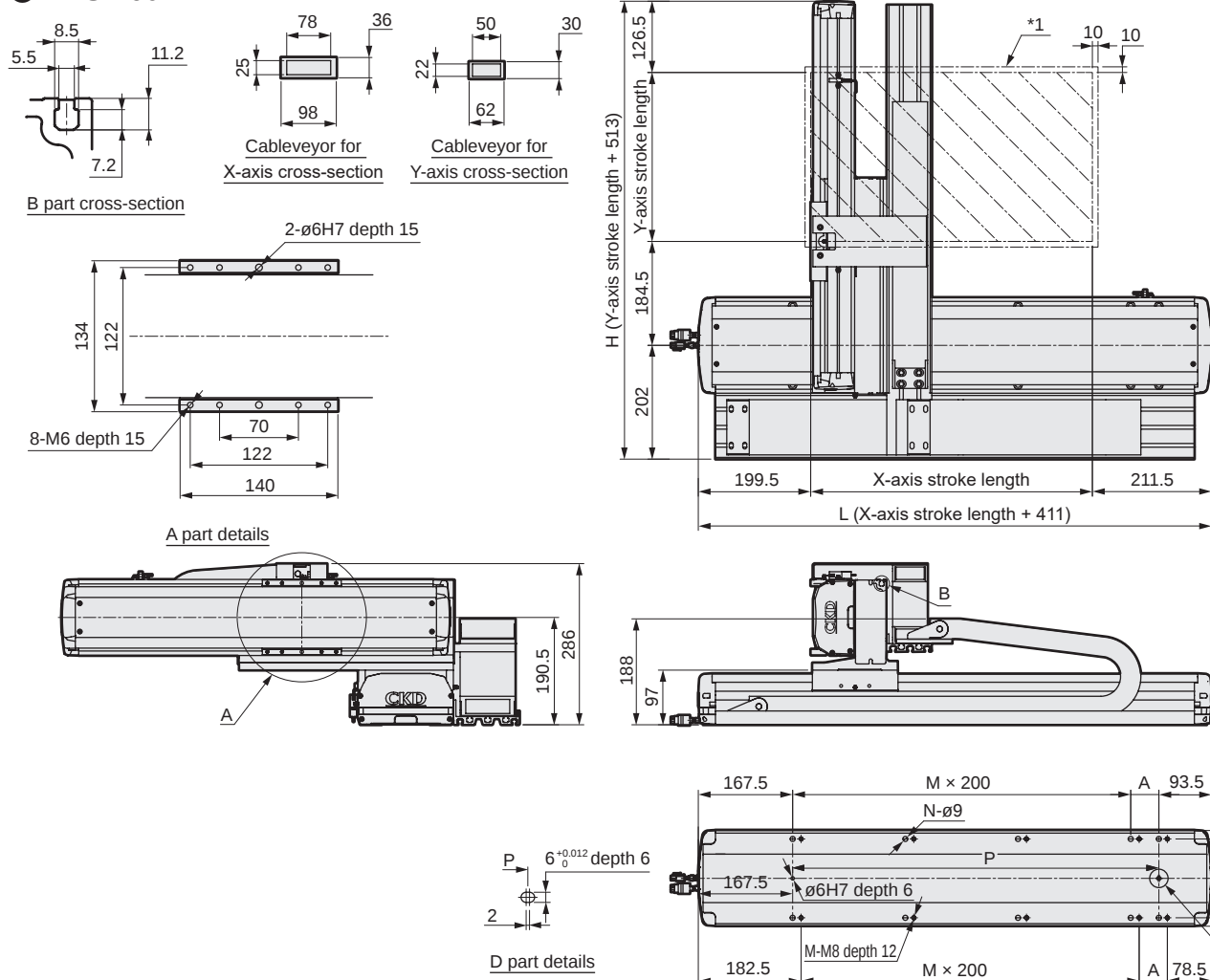
Cableveyor, axis combination bracket

Discontinued some variations

ETS Multi-Axis Series

Dimensions

● ETS-760A2



*1: Stops within the moving range and this range when returning to origin.

*This figure shows the dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000																900		800	

X-axis stroke (mm)	1100	1150	1200	1250
L	1511	1561	1611	1661
A	50	100	150	200
M	6	6	6	6
N	16	16	16	16
P	1250	1300	1350	1400
Max. working speed (mm/s)	700		600	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
Max. working speed (mm/s)	1000												
Max. load capacity (kg)	30				25				20				16

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-17	M	B	Coupling	Assembled at shipment	400 W	M5 4
	Y					M5 4
ETS-14	P				200 W	M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

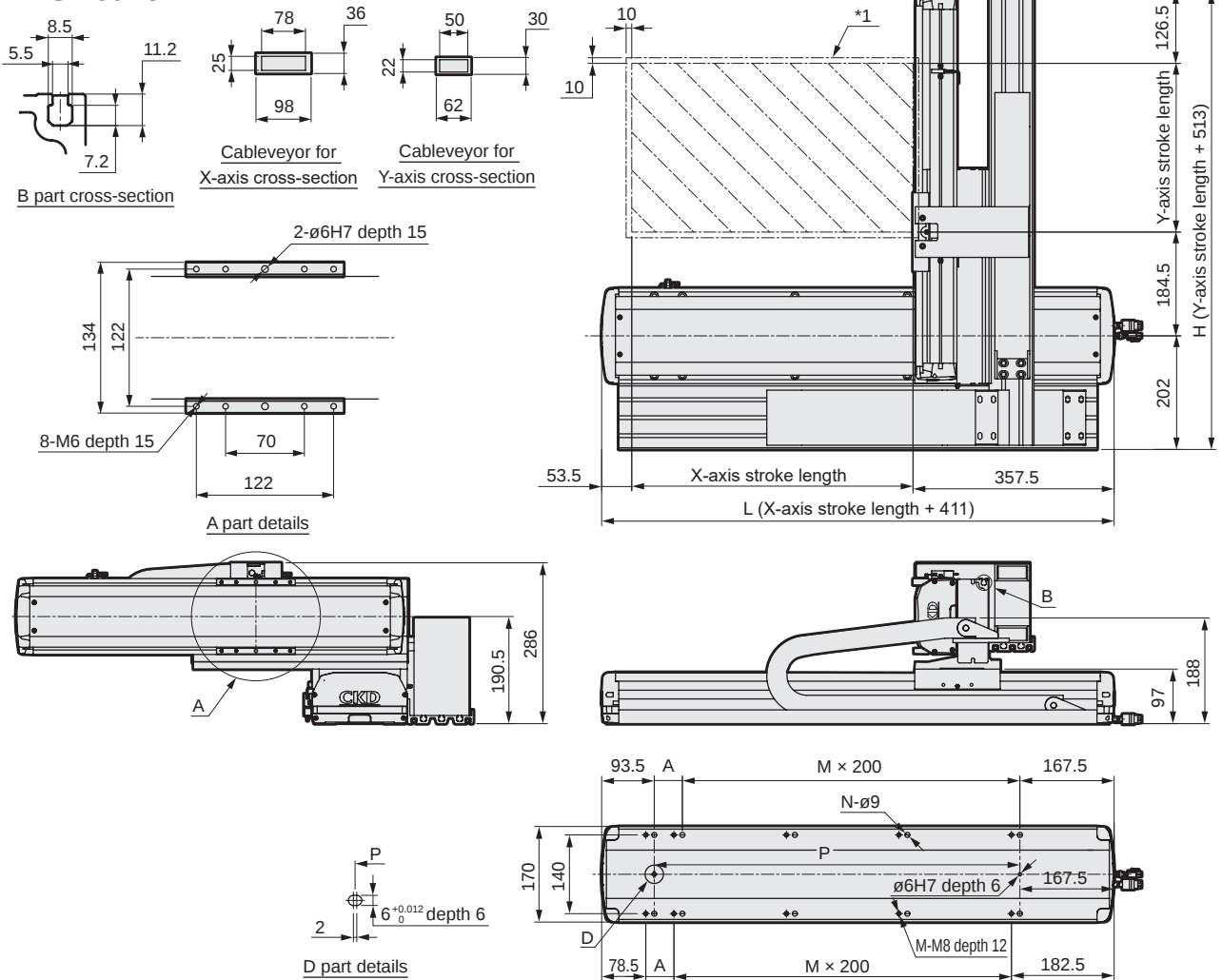
*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

Dimensions

● ETS-760A3



*1: Stops within the moving range and this range when returning to origin.

*This figure shows the dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000																900	800		

X-axis stroke (mm)	1100	1150	1200	1250
L	1511	1561	1611	1661
A	50	100	150	200
M	6	6	6	6
N	16	16	16	16
P	1250	1300	1350	1400
Max. working speed (mm/s)	700	600		

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
Max. working speed (mm/s)	1000												
Max. load capacity (kg)	30					25			20			16	

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-17	M	B	Coupling	Assembled at shipment	400 W	M5 4
	Y					M5 4
ETS-14	P				200 W	M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

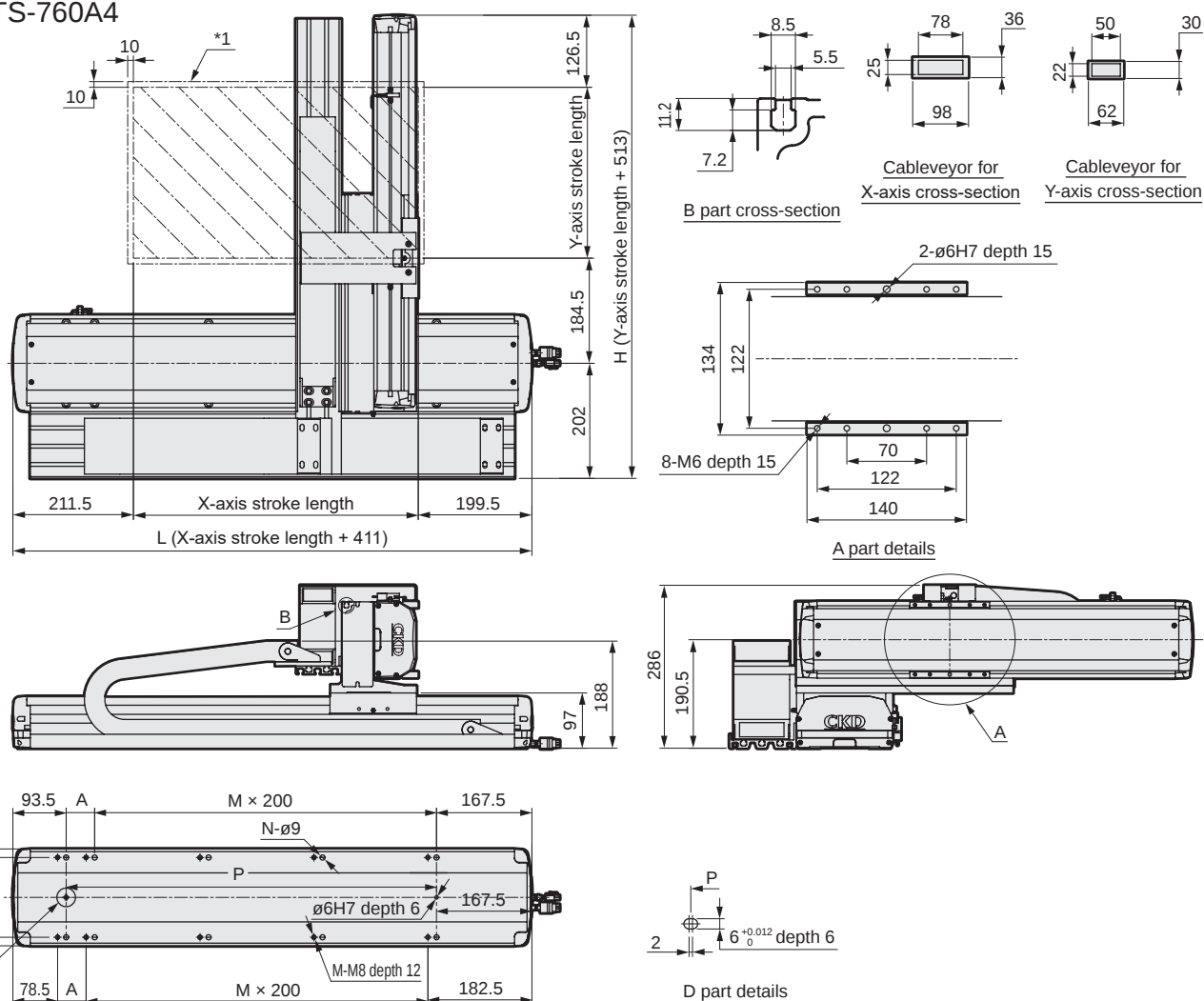
[Other attachments for axis combinations]

Cableveyor, axis combination bracket

ETS Multi-Axis Series

Dimensions

● ETS-760A4



*1: Stops within the moving range and this range when returning to origin.

*This figure shows the dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000																900		800	

X-axis stroke (mm)	1100	1150	1200	1250	Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	
L	1511	1561	1611	1661	H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163	
A	50	100	150	200	Max. working speed (mm/s)	1000													
M	6	6	6	6	Max. load capacity (kg)	30				25		20				16			
N	16	16	16	16															
P	1250	1300	1350	1400															
Max. working speed (mm/s)	700		600																

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt	
ETS-17	M	B	Coupling	Assembled at shipment	400 W	M5	4
	Y					M5	4
ETS-14	P				200 W	M4	4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

Discontinued some variations

ETS Multi-Axis Series

Dimensions (X-Y axes)

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis series

- Servo motor capacity: 750 W/400 W
- 2-axis combination X-Y axes (A type)

RoHS

How to order

ETS - 870 A 1 - 040 030 - M N W

A Combined axes
870 ETS-22 × ETS-17

B Combination
A X-Y axes

C Combination direction
1 to 4 Confirm the table below.

D 1st axis stroke
010 100 mm to (50 mm pitch)
150 1500 mm

E 2nd axis stroke
005 50 mm to (50 mm pitch)
075 750 mm

G Brake *1
N None

H Origin/Limit sensor (3 pcs × 2 axes) *2
N None
W Yes

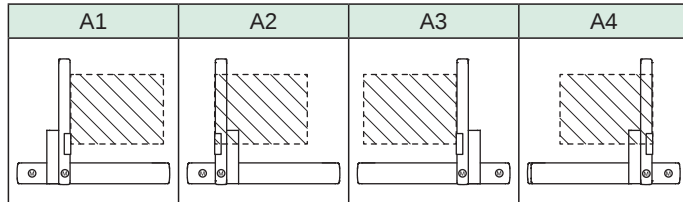
F Mounted motor specification *3
M Select the mounted motor specification from the table below.
Y
P
O

*1: The brake targets the 2nd axis.

*2: The user can adjust the sensor position. (Included at shipment)

*3: When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

C Combination direction



C Combination direction and motor mounting direction

Combined axes	Combination	Combination direction	Motor mounting direction and motor capacity			
			1st axis		2nd axis	
			Model	750 W	Model	400 W
ETS-870	A	1	ETS-22	B	ETS-17	B
		2		B		B
		3		B		B
		4		B		B

*B: Built-in mount

D stroke length

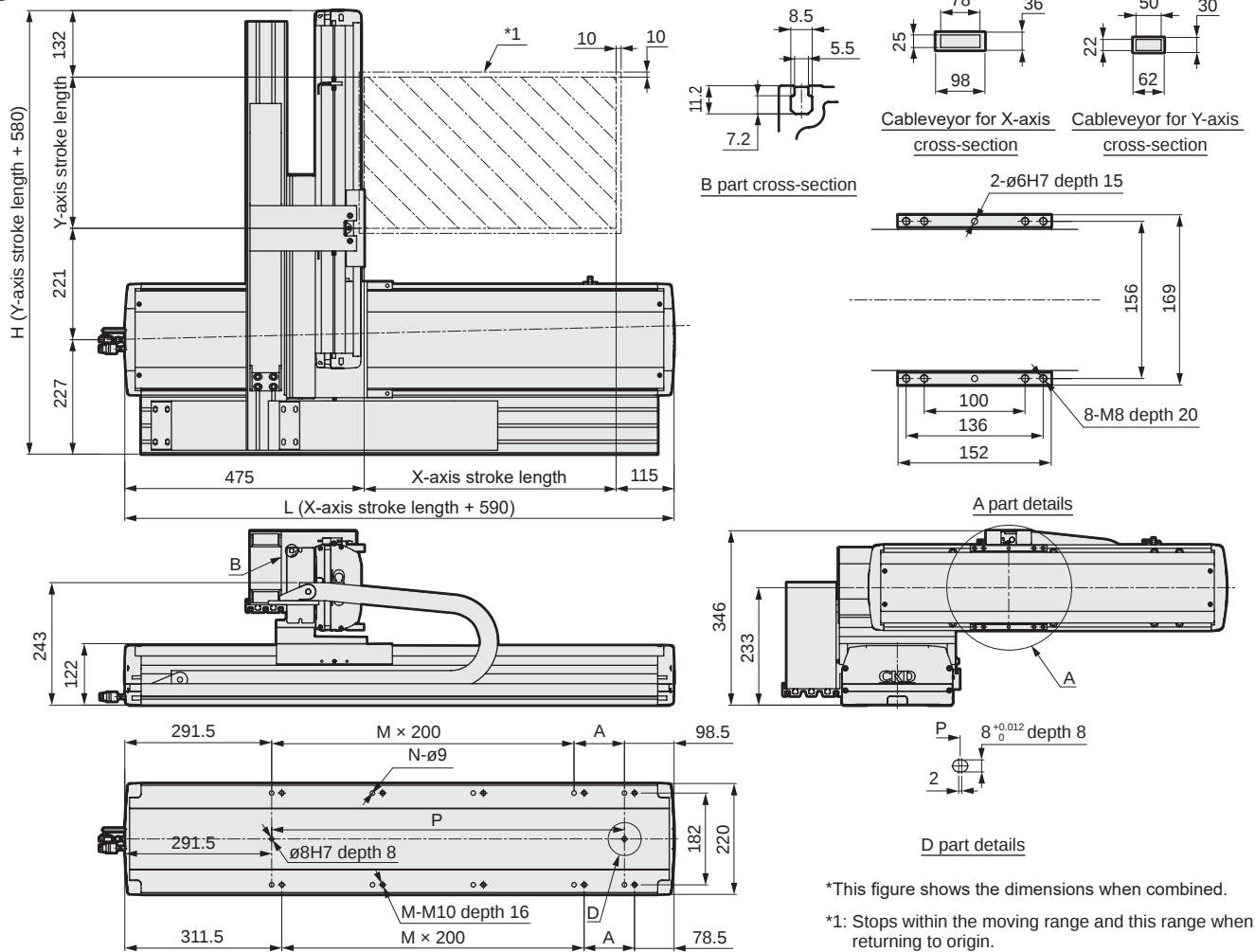
Combined axes	Combination	1st axis			2nd axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-870	A	ETS-22	25	100 to 1500	ETS-17	20	50 to 750

Grease nipple

Combined axes	Combination	Combination direction	1st axis		2nd axis	
			Model	Grease nipple position	Model	Grease nipple position
ETS-870	A	1	ETS-22	L	ETS-17	R
		2		L		L
		3		R		L
		4		R		R

*R: Right side L: Left side

● ETS-870A1



*This figure shows the dimensions when combined.

*1: Stops within the moving range and this range when returning to origin.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	5	5	5	5	5
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1250																		1125

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	50	100	150	200	50	100
M	6	6	6	6	7	7	7	7	8	8
N	16	16	16	16	18	18	18	18	20	20
P	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. working speed (mm/s)	1000		875		750		625		500	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
H	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330
Max. working speed (mm/s)	1000														
Max. load capacity (kg)	50			40			35			30			25		

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-22	M	B	Coupling	Assembled at shipment	750 W	M6/M5 4
ETS-17	Y				400 W	M6/M5 4
	P					M5/M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

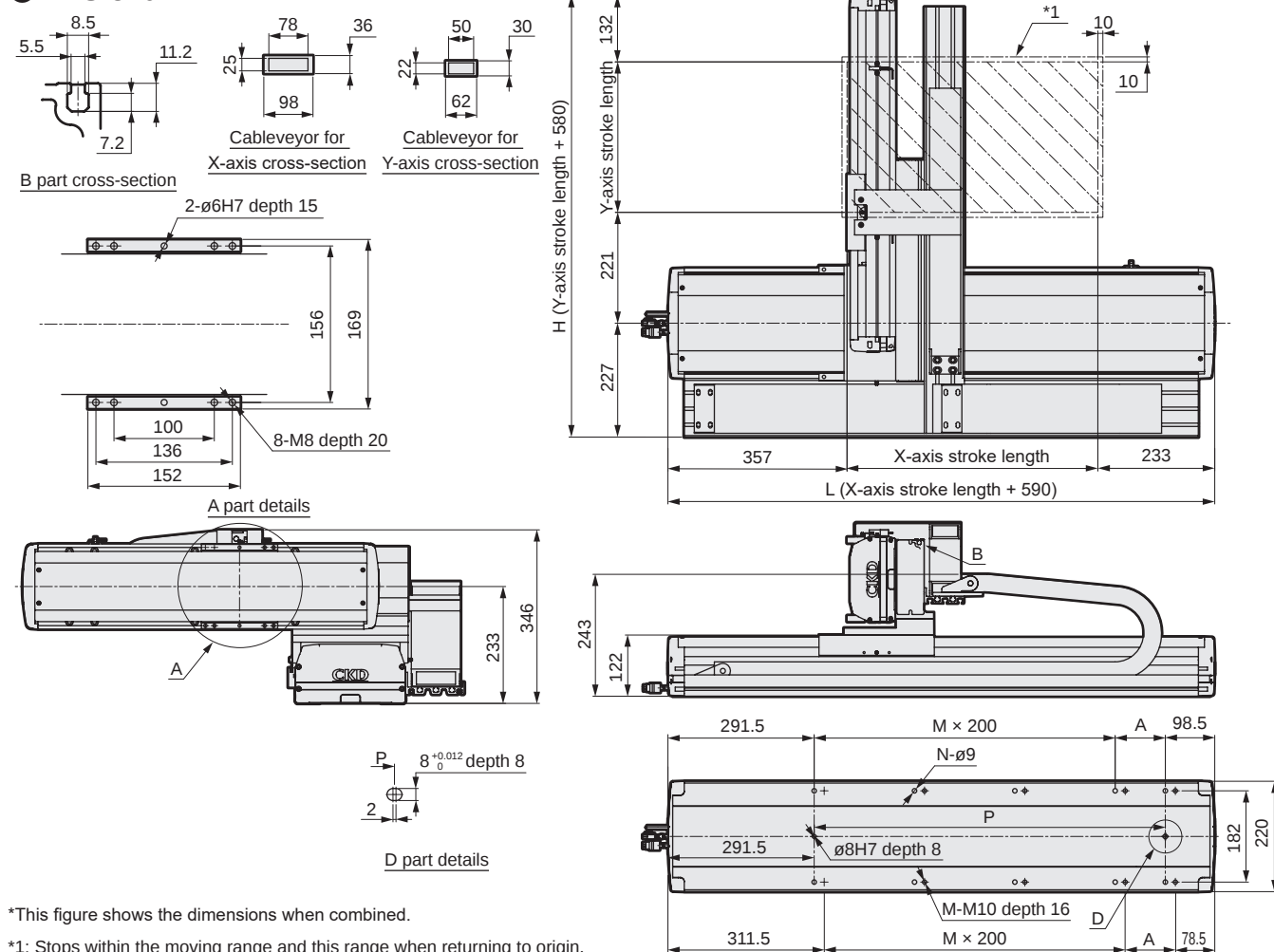
Cableveyor, axis combination bracket

Discontinued some variations

ETS Multi-Axis Series

Dimensions

● ETS-870A2



X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590
A	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1250																		1125

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	250	300	350	400	450	500
M	6	6	6	6	7	7	7	7	8	8
N	16	16	16	16	18	18	18	18	20	20
P	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. working speed (mm/s)	1000									

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
H	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330
Max. working speed (mm/s)	1000														
Max. load capacity (kg)	50			40			35			30			25		

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-22	M	B	Coupling	Assembled at shipment	750 W	M6/M5 4
ETS-17	Y				400 W	M6/M5 4
	P					M5/M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

Dimensions (X-Y axes)

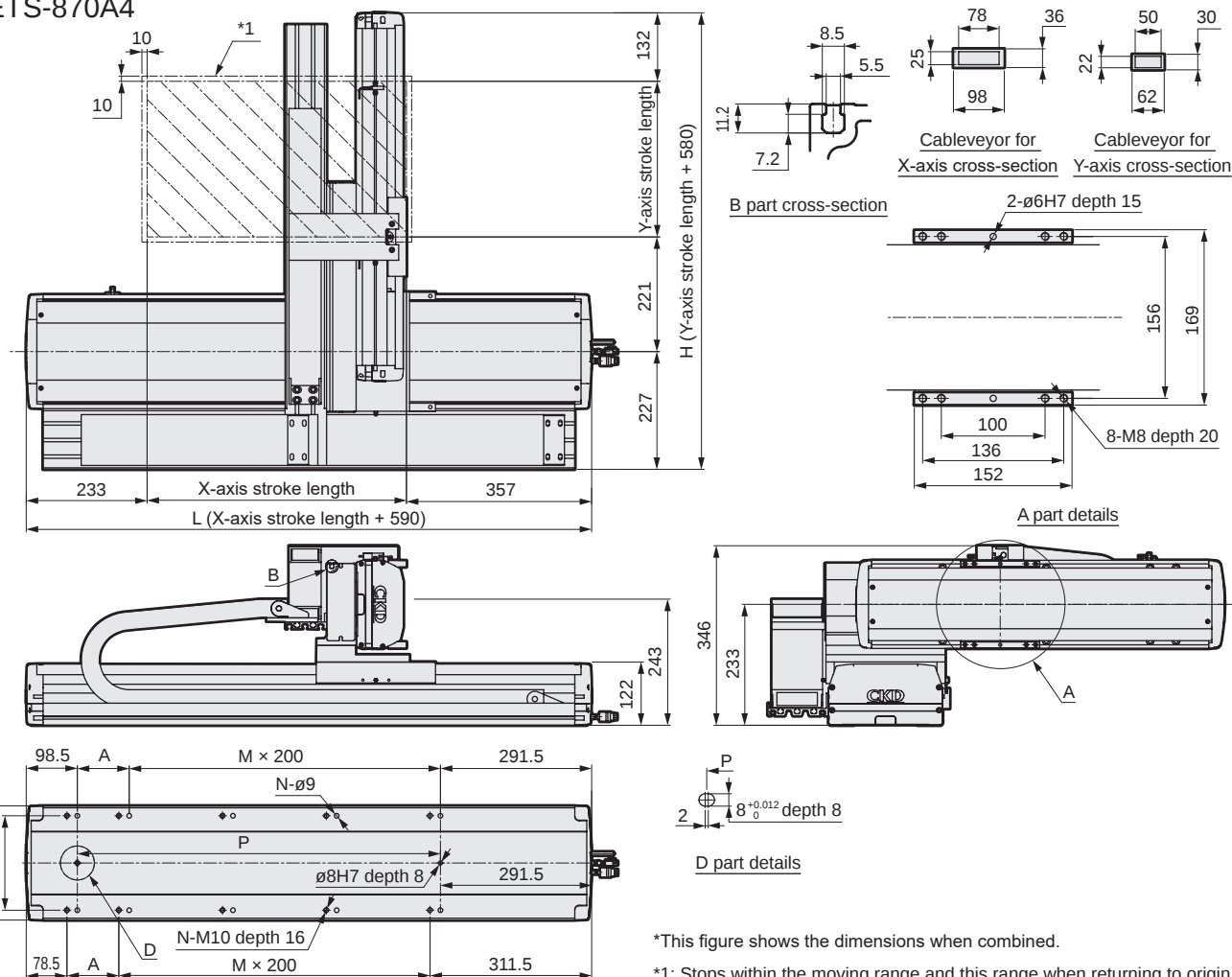
201

Discontinued some variations

ETS Multi-Axis Series

Dimensions

● ETS-870A4



*This figure shows the dimensions when combined.

*1: Stops within the moving range and this range when returning to origin.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590
A	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1250																		1125

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	60	65	70	75	80	85	90	95	100
M	6	6	6	6	7	7	7	7	8	8
N	16	16	16	16	18	18	18	18	20	20
P	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. working speed (mm/s)	1000									

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
H	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330
Max. working speed (mm/s)	1000														
Max. load capacity (kg)	50			40			35			30			25		

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specification	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-22	M	B	Coupling	Assembled at shipment	750 W	M6/M5 4
ETS-17	Y				400 W	M6/M5 4
	P					M5/M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

Discontinued some variations

ETS Multi-Axis Series

Dimensions (X-Y axes)

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis Series

- Servo motor capacity: 200 W/400 W/750 W
- 2-axis combination X-Z axes (P type)

RoHS

How to order

ETS - 650 P 1 - 040 030 - M B W

A Combined axes	
650	ETS-14 × ETS-13
760	ETS-17 × ETS-14
880	ETS-22 × ETS-22

B Combination	
P	X-Z axes

C Combination direction	
1, 2	Confirm the table below.

D 1st axis stroke	
010	100 mm to (50 mm pitch)
150	1500 mm

E 2nd axis stroke	
005 to 095	50 mm to (50 mm pitch) 950 mm

G Brake *1	
B	Yes

H Origin/Limit sensor (3 pcs × 2 axes) *2	
N	None
W	Yes

F Mounted motor specification *3	
M	Select the mounted motor specification from the table below.
Y	
P	
O	

F Mounted motor specification

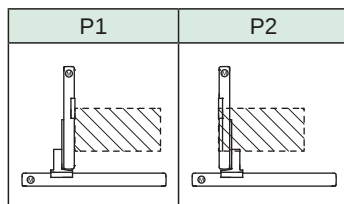
Manufacturer	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics Co., Ltd.	M	M	M
Sanyo Denki Co., Ltd.	M	M	-
YASKAWA Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	O	O	O

*1: The brake targets the 2nd axis.

*2: The user can adjust the sensor position. (Included at shipment)

*3: When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

C Combination direction



Axis combination specifications

C Combination direction and motor mounting direction

Combined axes	Combination	Combination direction	Motor mounting direction and motor capacity							
			1st axis				2nd axis			
			Model	200 W	400 W	750 W	Model	200 W	400 W	750 W
ETS-650	P	1.2	ETS-14	-	B	-	ETS-13	B (with brake)	-	-
ETS-760	P	1.2	ETS-17	-	B	-	ETS-14	-	B (with brake)	-
ETS-880	P	1.2	ETS-22	-	-	B	ETS-22	-	-	B (with brake)

*B: Built-in mount

DE stroke length

Combined axes	Combination	1st axis			2nd axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-650	P	ETS-14	20	100 to 1050	ETS-13	10	50 to 550
ETS-760		ETS-17	20	100 to 1250	ETS-14	10	50 to 650
ETS-880		ETS-22	25	100 to 1500	ETS-22	15	50 to 950

Grease nipple

Combined axes	Combination	Combination direction	1st axis		2nd axis	
			Model	Grease nipple position	Model	Grease nipple position
ETS-650	P	1	ETS-14	L	ETS-13	L
		2		R		L
ETS-760	P	1	ETS-17	L	ETS-14	L
		2		R		L
ETS-880	P	1	ETS-22	L	ETS-22	L
		2		R		L

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

EBS

EBR

ETS

ECS

EBS

EBR

ETS

ECS

Safety
precautions

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis Series

- Servo motor capacity: 400 W/200 W
- 2-axis combination X-Z axes (P type)

RoHS

How to order

ETS - 650 P 1 - 040 030 - M B W

A Combined axes
650 ETS-14 × ETS-13

B Combination
P X-Z axes

C Combination direction
1, 2 Confirm the table below.

D 1st axis stroke
010 100 mm to (50 mm pitch)
105 1050 mm

E 2nd axis stroke
005 50 mm to (50 mm pitch)
055 550 mm

F Mounted motor specification *3
M Select the mounted motor specification from the table below.
Y
P
O

G Brake *1
B Yes

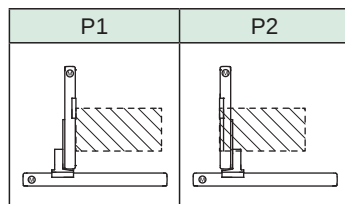
H Origin/Limit sensor (3 pcs × 2 axes) *2
N None
W Yes

*1: The brake targets the 2nd axis.

*2: The user can adjust the sensor position. (Included at shipment)

*3: When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

C Combination direction



C Combination direction and motor mounting direction

Combined axes	Combination	Combination direction	Motor mounting direction and motor capacity			
			1st axis		2nd axis	
			Model	400 W	Model	200 W
ETS-650	P	1	ETS-14	B	ETS-13	B (with brake)
		2		B		B (with brake)

*B: Built-in mount

D stroke length

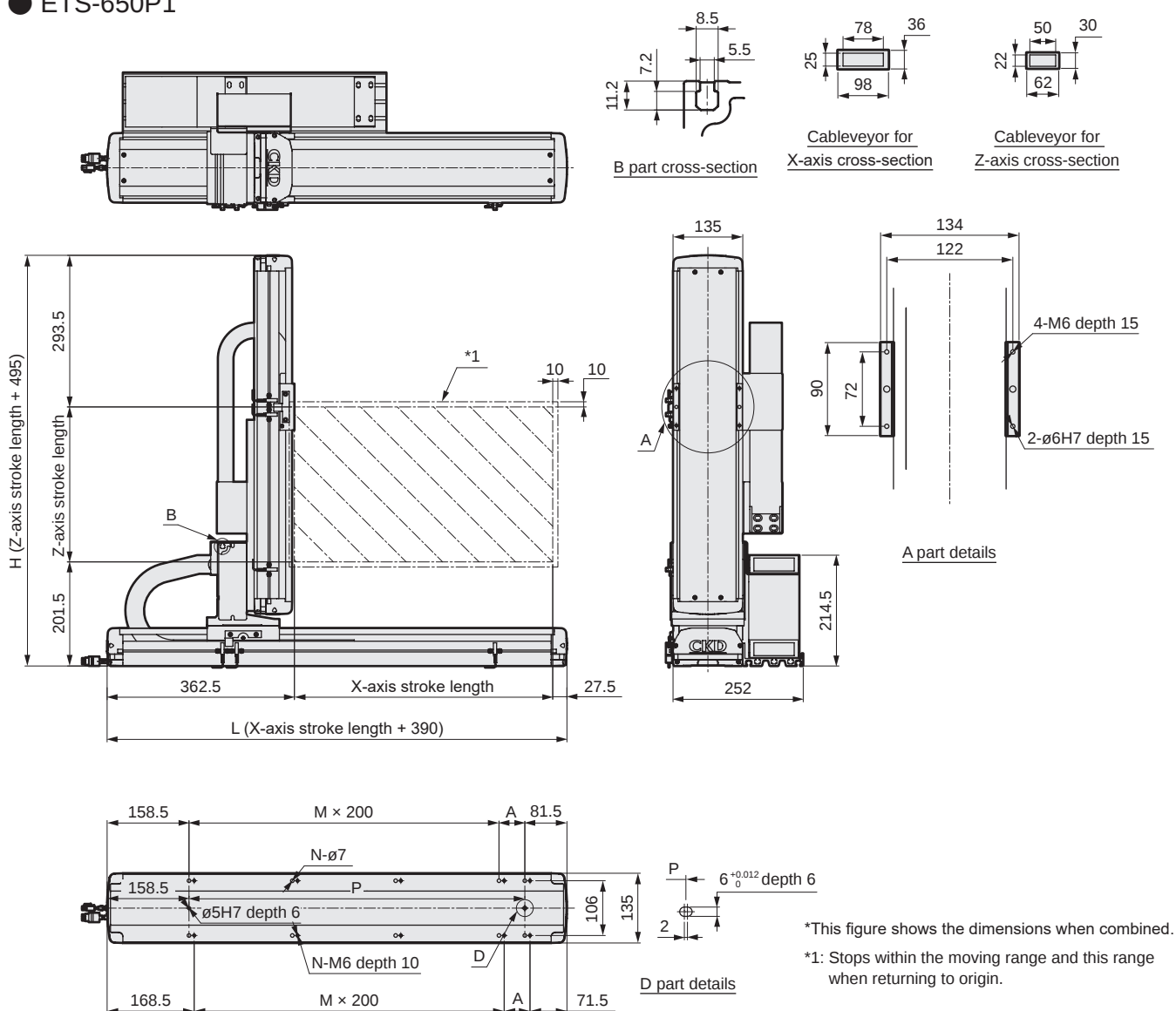
Combined axes	Combination	1st axis			2nd axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-650	P	ETS-14	20	100 to 1050	ETS-13	10	50 to 550

Grease nipple

Combined axes	Combination	Combination direction	1st axis		2nd axis	
			Model	Grease nipple position	Model	Grease nipple position
ETS-650	P	1	ETS-14	L	ETS-13	L
		2		R		L

*R: Right side L: Left side

● ETS-650P1



X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000															900	800	700	600	500

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
H	545	595	645	695	745	795	845	895	945	995	1045
Max. working speed (mm/s)	500										
Max. load capacity (kg)	10										

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specifications	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-14	M	B	Coupling	Assembled at shipment	400 W	M5 4
ETS-13	Y				200 W	M5 4
	P					M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

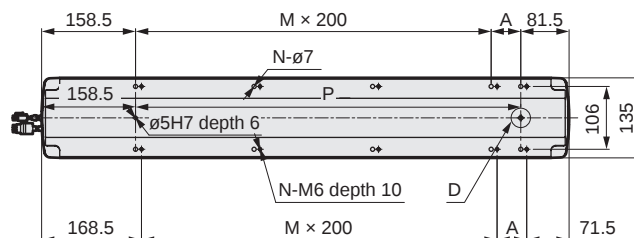
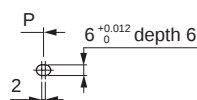
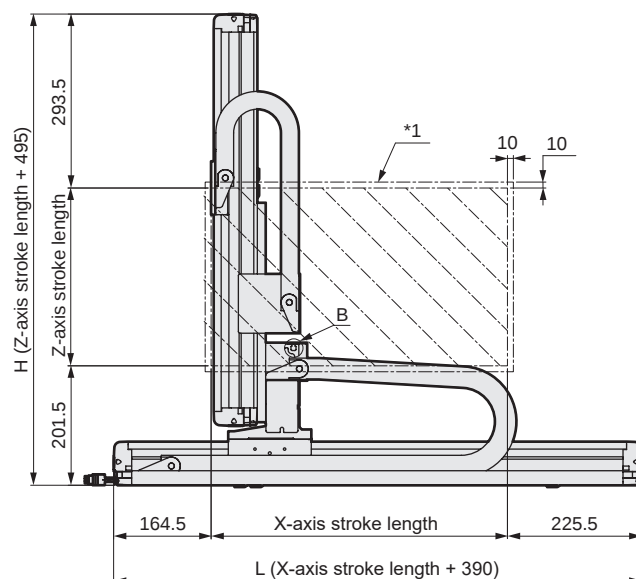
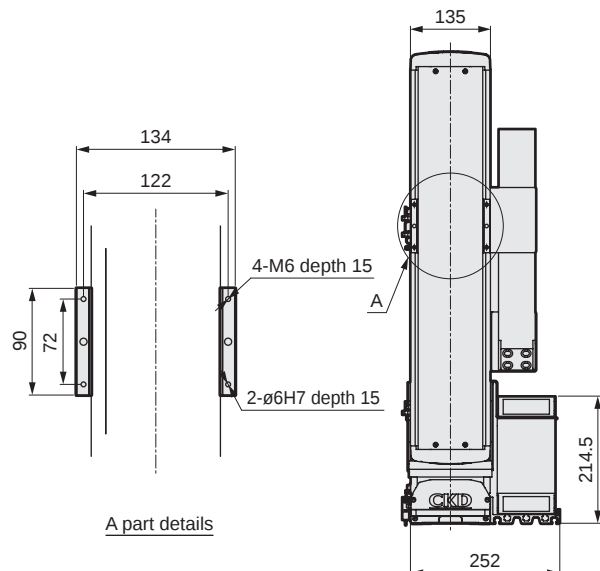
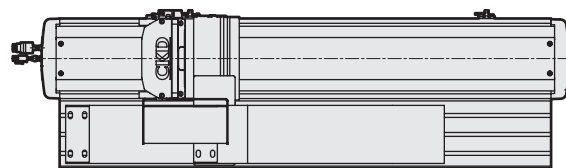
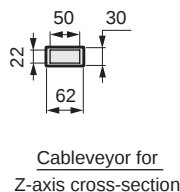
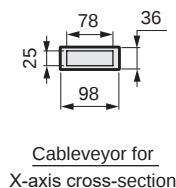
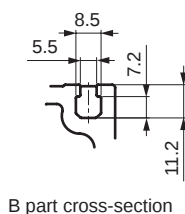
Cableveyor, axis combination bracket

Discontinued some variations

ETS Multi-Axis Series

Dimensions

● ETS-650P2



*This figure shows the dimensions when combined.

*1: Stops within the moving range and this range when returning to origin.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. working speed (mm/s)	1000														900	800	700	600	500	400
Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550									
H	545	595	645	695	745	795	845	895	945	995	1045									
Max. working speed (mm/s)	500																			
Max. load capacity (kg)	10																			

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specifications	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-14	M	B	Coupling	Assembled at shipment	400 W	M5 4
	Y					M5 4
ETS-13	P				200 W	M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis Series

- Servo motor capacity: 400 W
- 2-axis combination X-Z axes (P type)

RoHS

How to order

ETS - 760 P 1 - 040 030 - M B W

A Combined axes
760 ETS-17 × ETS-14

B Combination
P X-Z axes

C Combination direction
1, 2 Confirm the table below.

D 1st axis stroke
010 100 mm to (50 mm pitch)
125 1250 mm

E 2nd axis stroke
005 50 mm to (50 mm pitch)
065 650 mm

F Mounted motor specification *3
M Select the mounted motor specification from the table below.
Y
P
O

G Brake *1
B Yes

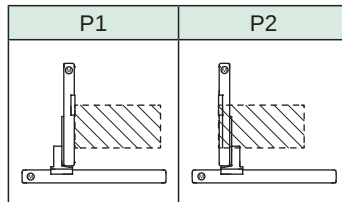
H Origin/Limit sensor (3 pcs × 2 axes) *2
N None
W Yes

*1: The brake targets the 2nd axis.

*2: The user can adjust the sensor position. (Included at shipment)

*3: When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

C Combination direction



C Combination direction and motor mounting direction

Combined axes	Combination	Combination direction	Motor mounting direction and motor capacity			
			1st axis		2nd axis	
			Model	400 W	Model	400 W
ETS-760	P	1	ETS-17	B	ETS-14	B (with brake)
		2		B		B (with brake)

D E stroke length

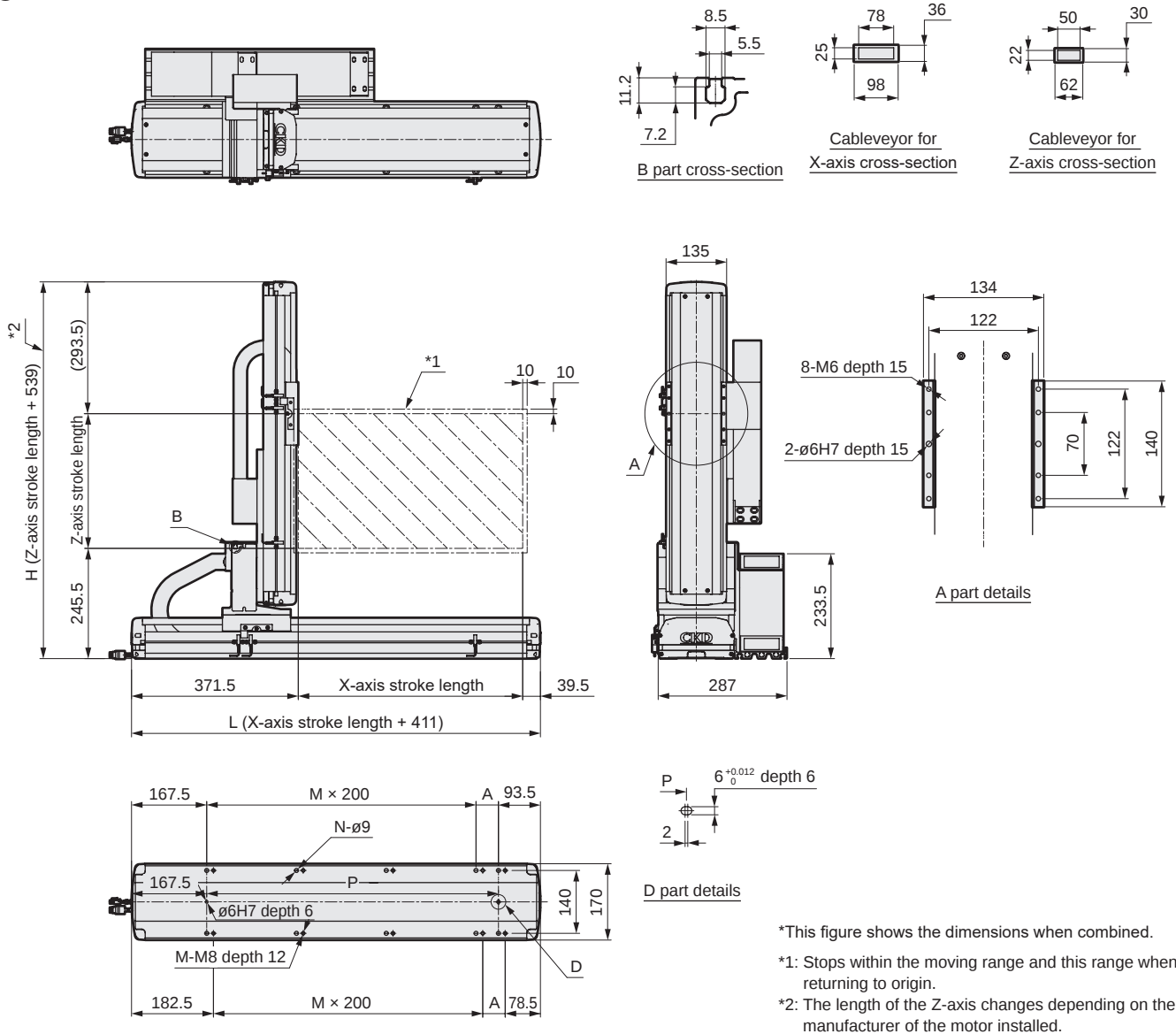
Combined axes	Combination	1st axis			2nd axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-760	P	ETS-17	20	100 to 1250	ETS-14	10	50 to 650

Grease nipple

Combined axes	Combination	Combination direction	1st axis		2nd axis	
			Model	Grease nipple position	Model	Grease nipple position
ETS-760	P	1	ETS-17	L	ETS-14	L
		2		R		L

*R: Right side L: Left side

● ETS-760P1



X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Max. working speed (mm/s)	1000																900		800		700		600	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189
Max. working speed (mm/s)	500												
Max. load capacity (kg)	22												

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specifications	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-17	M	B	Coupling	Assembled at shipment	400 W	M5 4
	Y					M5 4
ETS-14	P					M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

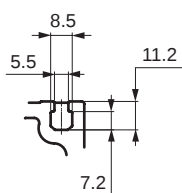
Cableveyor, axis combination bracket

Discontinued some variations

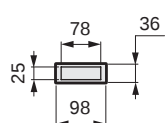
ETS Multi-Axis Series

Dimensions

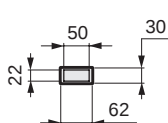
● ETS-760P2



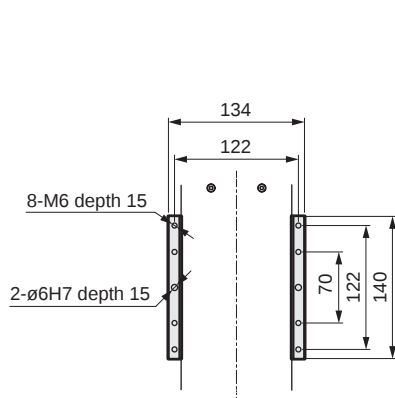
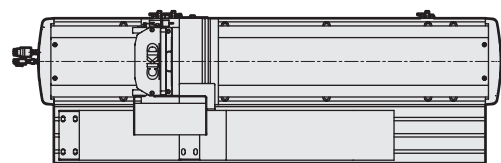
B part cross-section



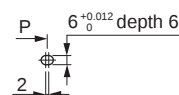
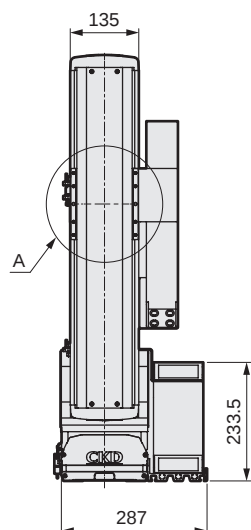
Cableveyor for
X-axis cross-section



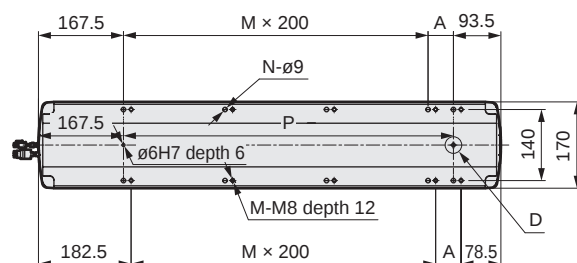
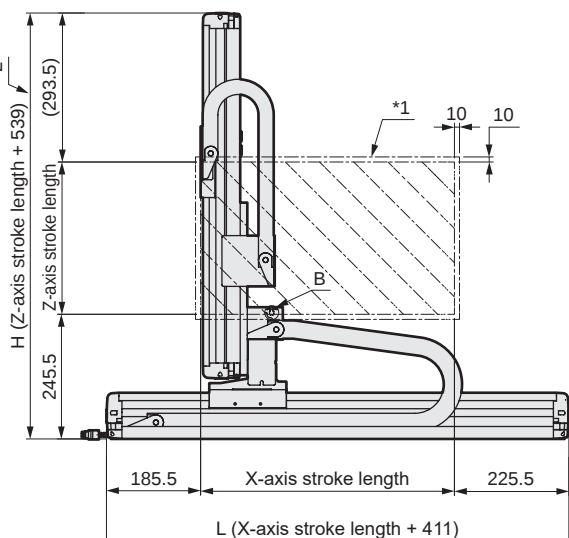
Cableveyor for
Z-axis cross-section



A part details



D part details



*This figure shows the dimensions when combined.

*1: Stops within the moving range and this range when returning to origin.

*2: The length of the Z-axis changes depending on the manufacturer of the motor installed.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Max. working speed (mm/s)	1000																900		800		700		600	
Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650											
H	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189											
Max. working speed (mm/s)	500																							
Max. load capacity (kg)	22																							

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specifications	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-17	M	B	Coupling	Assembled at shipment	400 W	M5 4
	Y					M5 4
ETS-14	P					M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

Discontinued some variations

ETS Multi-Axis Series

Dimensions (X-Z axes)

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis series

- Servo motor capacity: 750 W
- 2-axis combination X-Z axes (P type)

RoHS

How to order

ETS - 880 P 1 - 040 030 - M B W

A Combined axes
880 ETS-22 × ETS-22

B Combination
P X-Z axes

C Combination direction
1, 2 Confirm the table below.

D 1st axis stroke
010 100 mm to (50 mm pitch)
150 1500 mm

E 2nd axis stroke
005 50 mm to (50 mm pitch)
095 950 mm

F Mounted motor specification *3
M Select the mounted motor specification from the table below.
Y
P
O

G Brake *1
B Yes

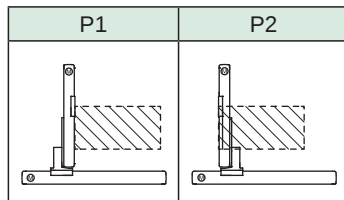
H Origin/Limit sensor (3 pcs × 2 axes) *2
N None
W Yes

*1: The brake targets the 2nd axis.

*2: The user can adjust the sensor position. (Included at shipment)

*3: When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

C Combination direction



C Combination direction and motor mounting direction

Combined axes	Combination	Combination direction	Motor mounting direction and motor capacity			
			1st axis		2nd axis	
			Model	750 W	Model	750 W
ETS-880	P	1	ETS-22	B	ETS-22	B (with brake)
		2		B		B (with brake)

*B: Built-in mount

D E stroke length

Combined axes	Combination	1st axis			2nd axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-880	P	ETS-22	25	100 to 1500	ETS-22	5	50 to 950

Grease nipple

Combined axes	Combination	Combination direction	1st axis		2nd axis	
			Model	Grease nipple position	Model	Grease nipple position
ETS-880	P	1	ETS-22	L	ETS-22	L
		2		R		L

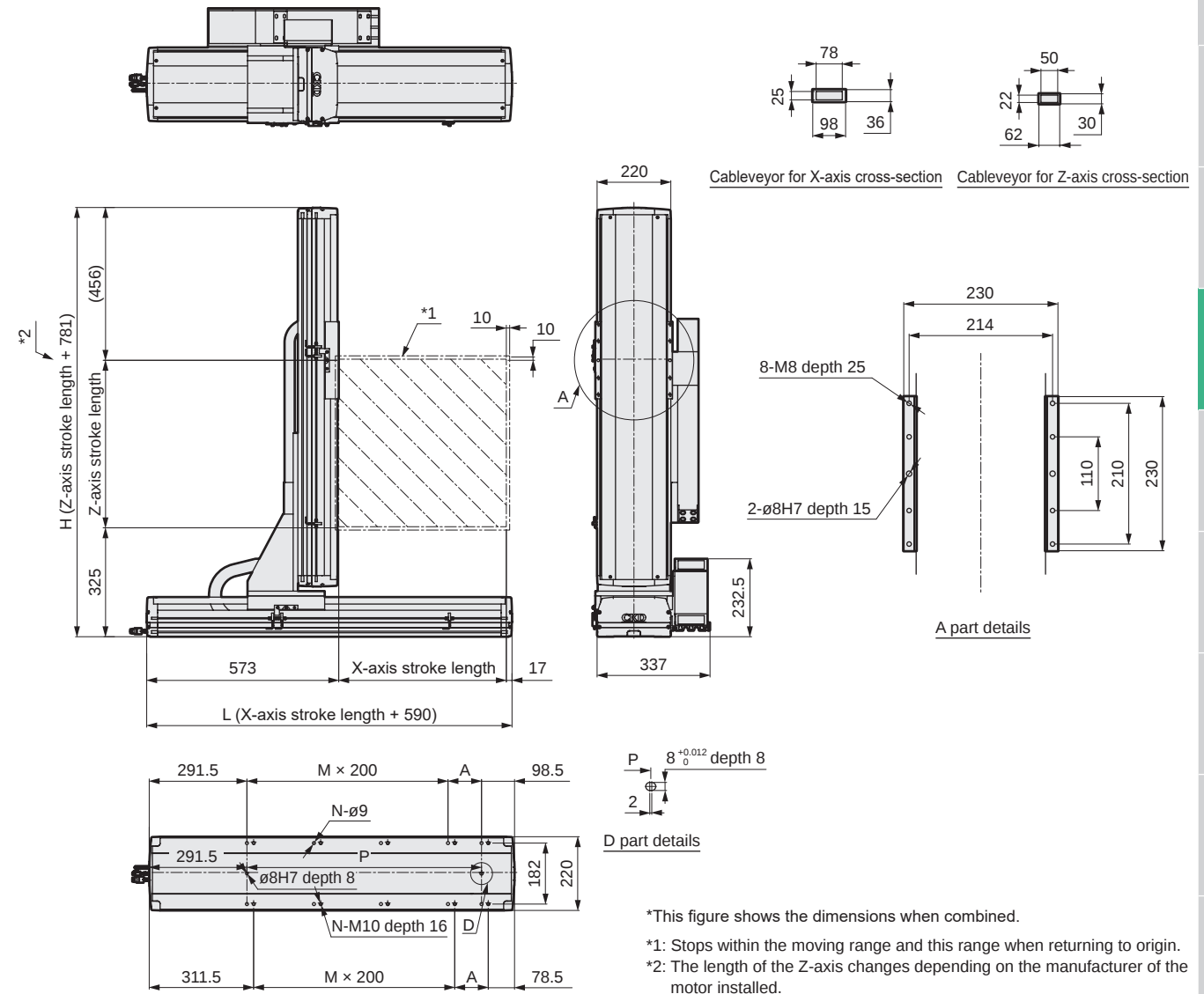
*R: Right side L: Left side

ETS Multi-Axis Series

Dimensions (X-Z axes)

Dimensions

● ETS-880P1

[illegible]

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specifications	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt	
ETS-22	M	B	Coupling	Assembled at shipment	750 W	M6	4
	Y					M6	4
	P					M5	4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

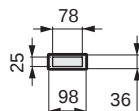
Cableveyor, axis combination bracket

Discontinued some variations

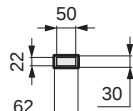
ETS Multi-Axis Series

Dimensions

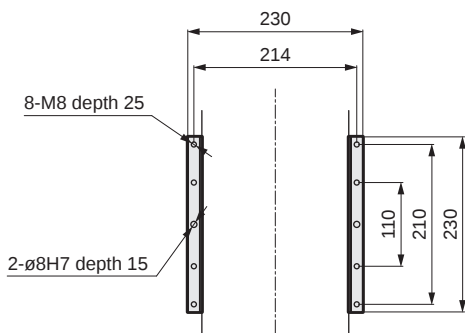
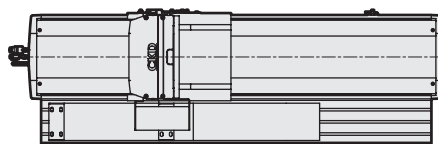
● ETS-880P2



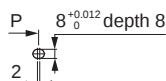
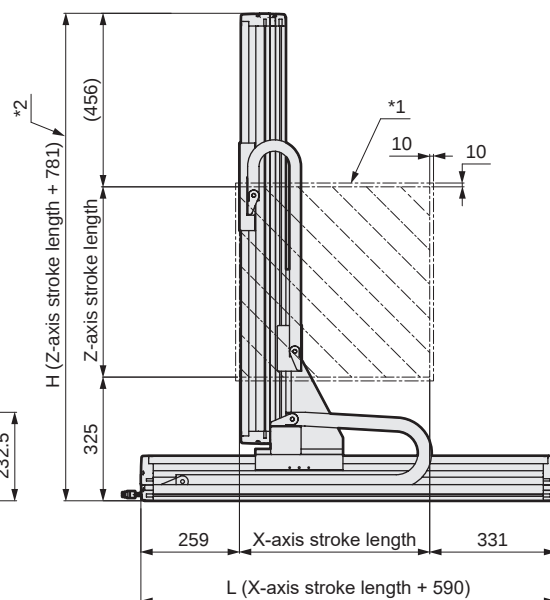
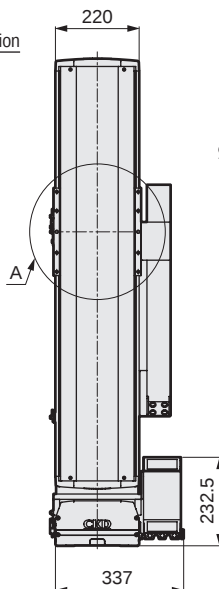
Cableveyor for X-axis cross-section



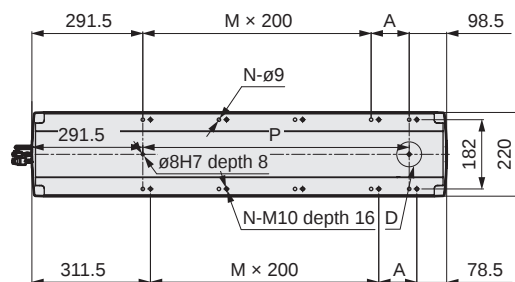
Cableveyor for Z-axis cross-section



A part details



D part details



*This figure shows the dimensions when combined.

*1: Stops within the moving range and this range when returning to origin.

*2: The length of the Z-axis changes depending on the manufacturer of the motor installed.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090	
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	
Max. working speed (mm/s)	1250																		1125		1000		875		750		625		500	
Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950											
H	831	881	931	981	1031	1081	1131	1181	1231	1281	1331	1381	1431	1481	1531	1581	1631	1681	1731											
Max. working speed (mm/s)	250																													
Max. load capacity (kg)	35																													

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specifications	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-22	M	B	Coupling	Assembled at shipment	750 W	M6 4
	Y					M6 4
	P					M5 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis Series

- Servo motor capacity: 400 W
- 2-axis combination Y-Z axes (F type)

RoHS

How to order

ETS - 760 F 1 - 040 030 - M B W

A Combined axes
760 ETS-17 × ETS-14

B Combination
F Y-Z axes

C Combination direction
1, 3 Confirm the table below.

D 1st axis stroke
010 100 mm to (50 mm pitch)
125 1250 mm

E 2nd axis stroke
005 50 mm to (50 mm pitch)
055 550 mm

G Brake *1
B Yes

H Origin/Limit sensor (3 pcs × 2 axes) *2
N None
W Yes

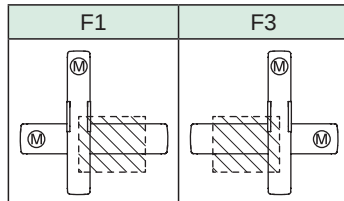
F Mounted motor specification *3
M Select the mounted motor specification from the table below.
Y
P
O

*1: The brake targets the 2nd axis.

*2: The user can adjust the sensor position. (Included at shipment)

*3: When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

C Combination direction



F Mounted motor specification

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
YASKAWA Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	O

*Refer to page 164 for the recommended motor model No.

C Combination direction and motor mounting direction

Combined axes	Combination	Combination direction	Motor mounting direction and motor capacity			
			1st axis		2nd axis	
			Model	400 W	Model	400 W
ETS-760	F	1	ETS-17	B	ETS-14	B (with brake)
		3		B		B (with brake)

*B: Built-in mount

D/E stroke length

Combined axes	Combination	1st axis			2nd axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-760	F	ETS-17	20	100 to 1250	ETS-14	10	50 to 550

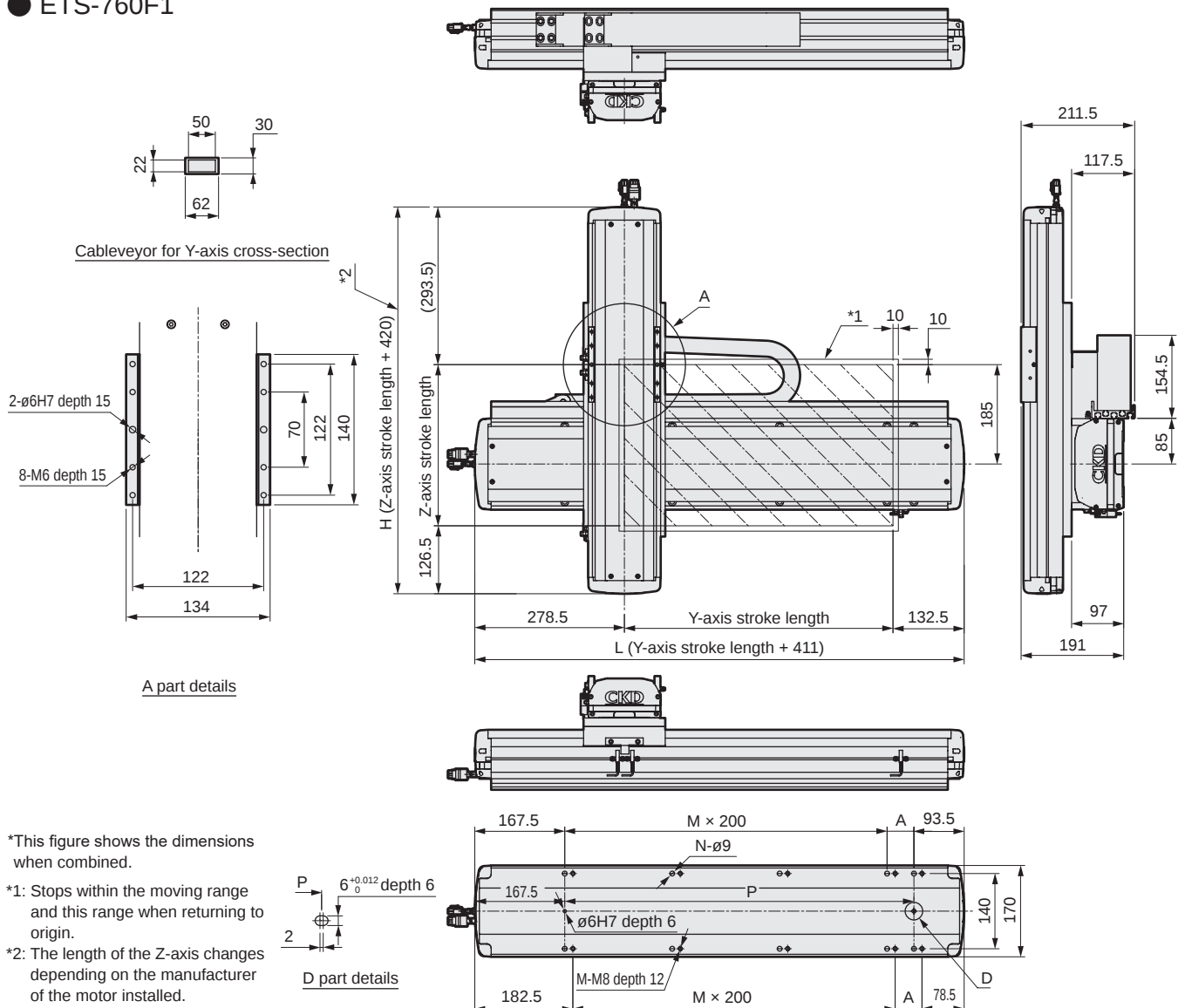
Grease nipple

Combined axes	Combination	Combination direction	1st axis		2nd axis	
			Model	Grease nipple position	Model	Grease nipple position
ETS-760	F	1	ETS-17	R	ETS-14	R
		3		L		L

*R: Right side L: Left side

Dimensions

● ETS-760F1



Y-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Max. working speed (mm/s)	1000																900	800	700	600				

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
H	470	520	570	620	670	720	770	820	870	920	970
Max. working speed (mm/s)	500										
Max. load capacity (kg)	22										

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specifications	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-17	M	B	Coupling	Assembled at shipment	400 W	M5 4
	Y					M5 4
ETS-14	P					M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

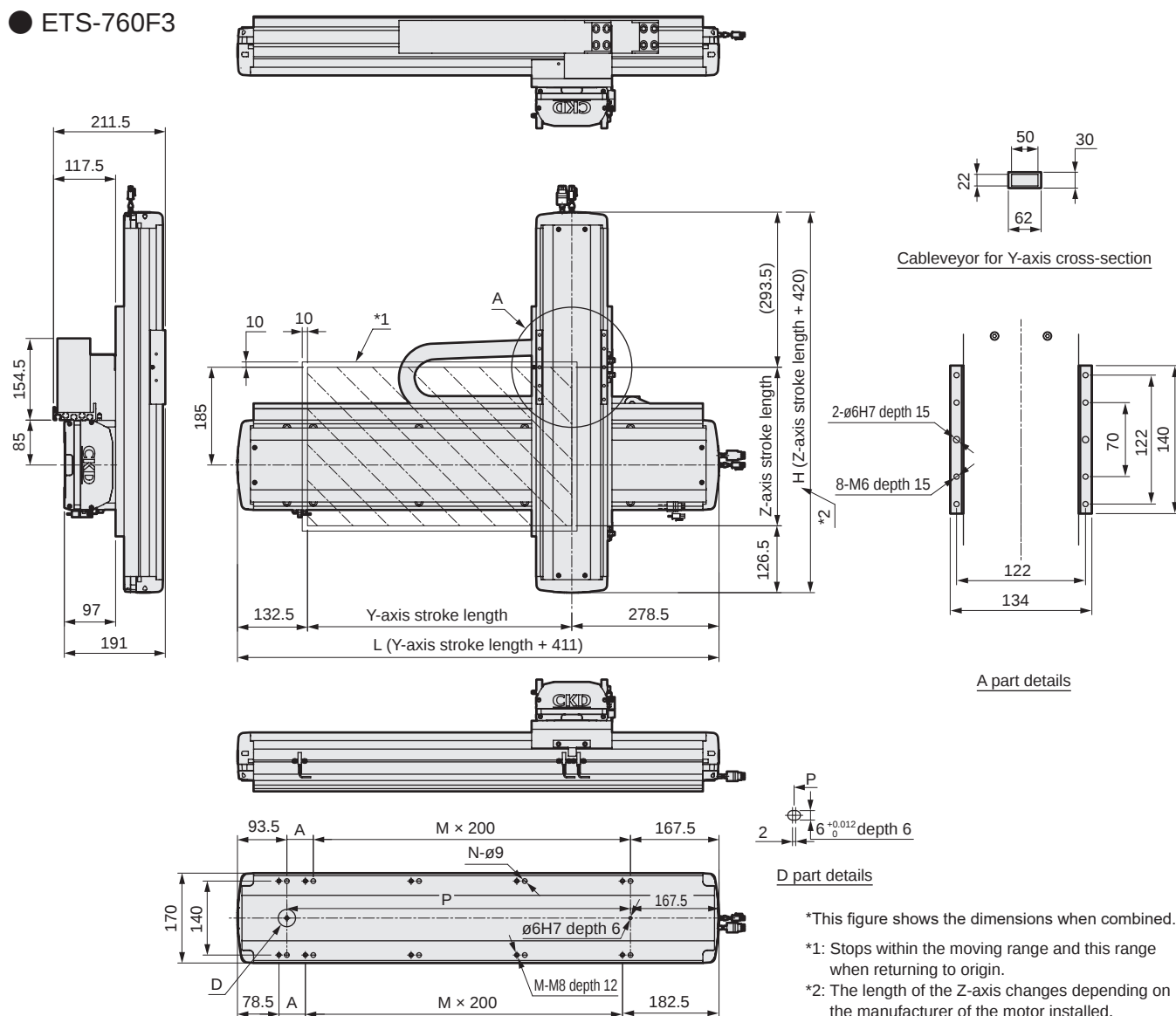
Cableveyor, axis combination bracket

Discontinued some variations

ETS Multi-Axis Series

Dimensions

● ETS-760F3



Y-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661	
A	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	
Max. working speed (mm/s)	1000																900			800		700		600	
Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550														
H	470	520	570	620	670	720	770	820	870	920	970														
Max. working speed (mm/s)	500																								
Max. load capacity (kg)	22																								

List of attachments

[Motor mounting parts]

Model No.	Mounted motor specifications	Motor mounting direction	Mounting parts	Shipment method	Motor capacity	Motor mounting bolt
ETS-17	M	B	Coupling	Assembled at shipment	400 W	M5 4
ETS-14	Y					M5 4
ETS-14	P					M4 4

*When "O" is selected for Mounted motor specification, the motor specification code for the 1st and 2nd axes is "M" or "P".

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	6

*Refer to page 156 for sensor specifications.

[Other attachments for axis combinations]

Cableveyor, axis combination bracket

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis Series

Combination parts: Cableveyor assembly

Sales of ETS-210A, 430A, 440A, 530F, 640F,
ETS-760G, 870G discontinued.

RoHS

How to order

ETS - 210 A - CABC 13 - X 030

A Combined axes	
210	ETS-06 × ETS-05
430	ETS-12 × ETS-10
440	ETS-12 × ETS-12
530	ETS-13 × ETS-10
640	ETS-14 × ETS-12
650	ETS-14 × ETS-13
760	ETS-17 × ETS-14
870	ETS-22 × ETS-17
880	ETS-22 × ETS-22

B Combination	
A	X-Y axes
G	X-Y axes with support guide
P	X-Z axes
F	Y-Z axes

D Axes related to part specifications	
X	X-axis
Y	Y-axis
Z	Z-axis

E D Axis stroke	
000 to 150	0 mm 1500 mm (In 50 mm increments)

C Combination direction	
00	Parts without combination direction restrictions
01	Combination direction 1 dedicated parts
02	Combination direction 2 dedicated parts
13	Combination directions 1/3 dedicated parts
14	Combination directions 1/4 dedicated parts
23	Combination directions 2/3 dedicated parts
24	Combination directions 2/4 dedicated parts

Single parts

ETS - TKP0450W78R75 30

B Link count	
01 to 99	1 link to 99 links

A Cableveyor (type)	
TKP0450W78R75	Cableveyor (internal size: 78 × 25) [external size: 98 × 36]
TKP0450W78R50	Cableveyor (internal size: 78 × 25) [external size: 98 × 36]
TKP0350W50R50	Cableveyor (internal size: 50 × 22) [external size: 62 × 30]

Servo motor compatible

ETV

ECV

EKS

Stepper motor compatible

Safety precautions

Discontinued some variations

Sales of ETS-210A, 430A, 440A, 530F, 640F, ETS-760G, 870G discontinued.

ETS Multi-Axis Series

Combination parts: Cableveyor assembly

Combination table

			1st axis		2nd axis		Part
A Combined axes	B Combination	C Combination direction (Limited)	D Axes related to part specifications	E D Axis stroke	D Axes related to part specifications	E D Axis stroke	Cableveyor (Type)
ETS-210	A	13	X	100 to 800	-	-	TKP0350W50R50
		24					
		14	-	-	Y	50 to 350	TKP0350W50R50
		23					
ETS-430	A	13 *1	X	100 to 1050	-	-	TKP0350W50R50
		24 *1					
		14	-	-	Y	50 to 550	TKP0350W50R50
		23					
ETS-440	A	14	-	-	Y	50 to 550	TKP0350W50R50
		23					
ETS-650	A	13	X	100 to 1050	-	-	TKP0450W78R50
		24					
		14	-	-	Y	50 to 650	TKP0350W50R50
		23					
ETS-760	A	13 *3	X	100 to 1250	-	-	TKP0450W78R50
		24 *3					
		14	-	-	Y	50 to 650	TKP0350W50R50
		23					
ETS-870	A	13 *4	X	100 to 1500	-	-	TKP0450W78R75
		24 *4					
		14	-	-	Y	50 to 750	TKP0350W50R50
		23					
ETS-760	G	14	-	-	Y	200 to 850	TKP0350W50R50
		23					
ETS-870	G	14	-	-	Y	200 to 1050	TKP0350W50R50
		23					
ETS-650	P	01	X	100 to 1050	-	-	TKP0450W78R75
		02					
ETS-760	P	00 *2	-	-	Z	50 to 650	TKP0350W50R50
		01	X	100 to 1250	-	-	TKP0450W78R75
		02					
ETS-880	P	00	-	-	Z	50 to 950	TKP0350W50R50
		01	X	100 to 1500	-	-	TKP0450W78R75
		02					
ETS-530	F	00	Y	100 to 1050	-	-	TKP0350W50R50
ETS-640	F	00	Y	100 to 1050	-	-	TKP0350W50R50
ETS-760	F	00	Y	100 to 1250	-	-	TKP0350W50R50

*1 Common part with ETS-440A

*2 Common part with ETS-650P

*3 Common part with ETS-760G

*4 Common part with ETS-870G

Servo motor compatible

Stepper motor compatible

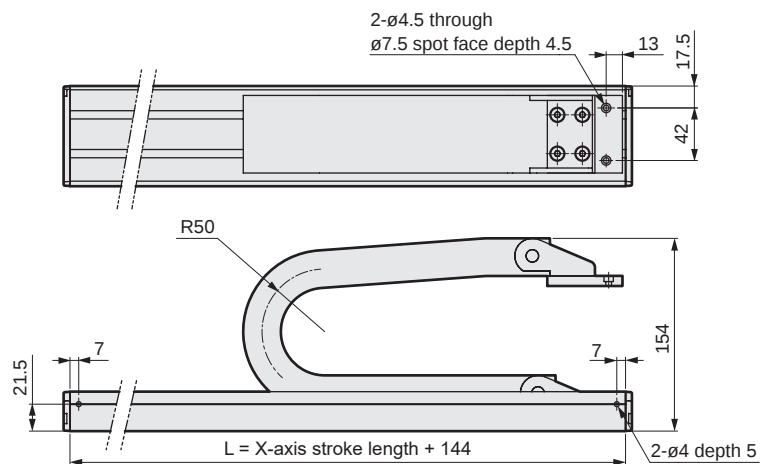
Safety
precautions

Discontinued some variations

ETS Multi-Axis Series

Cableveyor dimensions

● ETS-210A-CABC13-X/CABC24-X

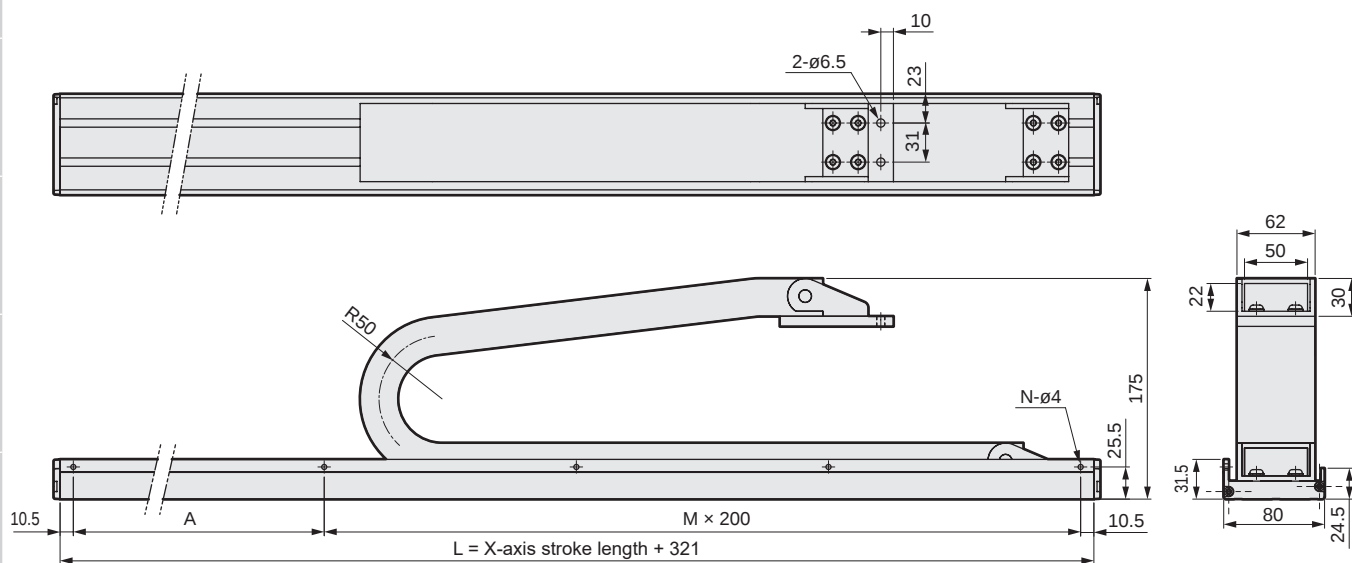


No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
A1/A3	85	50	35
A2/A4	125	50	35

A: Basic length R: Bending radius S: Link pitch

● ETS-430A-CABC13-X/CABC24-X



No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
A1/A3	260	50	35
A2/A4	368	50	35

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	421	471	521	571	621	671	721	771	821	871	921	971	1021	1071	1121	1171	1221	1271	1321	1371
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8

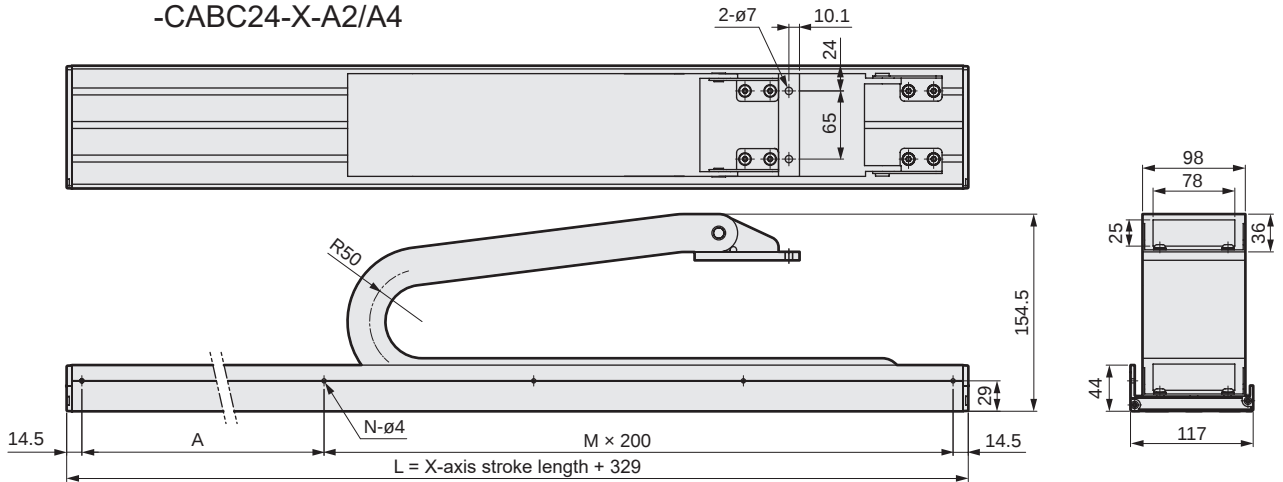
Discontinued some variations

ETS Multi-Axis Series

Combination parts: Cableveyor assembly

Cableveyor dimensions

● ETS-650A-CABC13-X-A1/A3 -CABC24-X-A2/A4



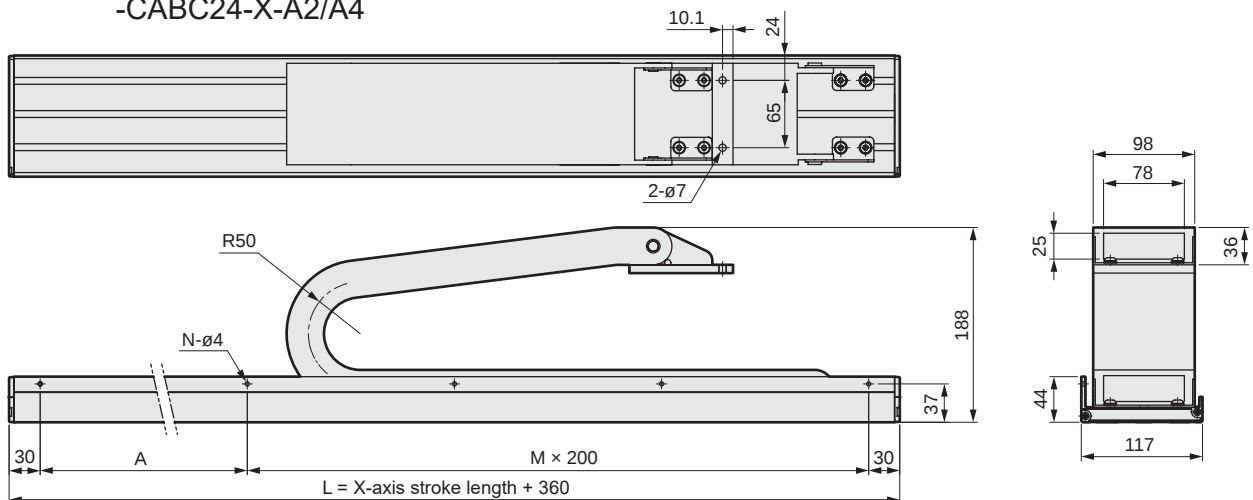
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
A1/A3	250	50	45
A2/A4	416	50	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179	1229	1279	1329	1379
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

● ETS-760A-CABC13-X-A1/A3 -CABC24-X-A2/A4



No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
A1/A3	265	50	45
A2/A4	421	50	45

A: Basic length R: Bending radius S: Link pitch

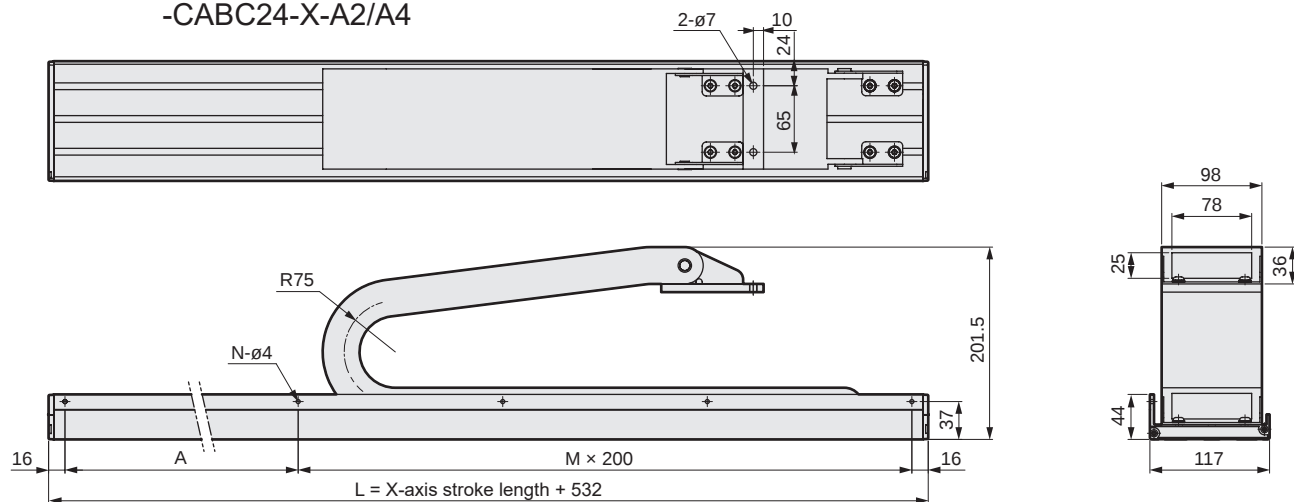
X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160	1210	1260	1310	1360	1410	1460	1510	1560	1610
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9

Discontinued some variations

ETS Multi-Axis Series

Cableveyor dimensions

● ETS-870A-CABC13-X-A1/A3 -CABC24-X-A2/A4



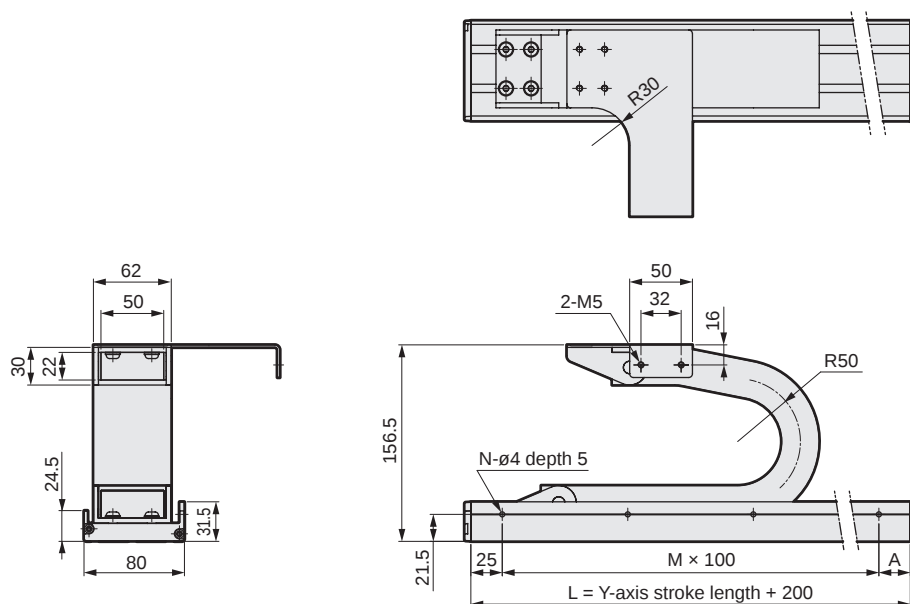
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
A1/A3	355	75	45
A2/A4	605	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532	1582	1632	1682	1732	1782	1832	1882	1932	1982	2032
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9
N	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11

● ETS-210A-CABC14-Y



Y-axis stroke (mm)	50	100	150	200	250	300	350
L	250	300	350	400	450	500	550
A	25	75	25	75	25	75	25
M	2	2	3	3	4	4	5
N	3	3	4	4	5	5	6

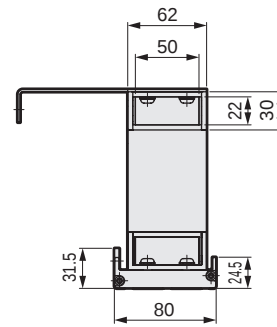
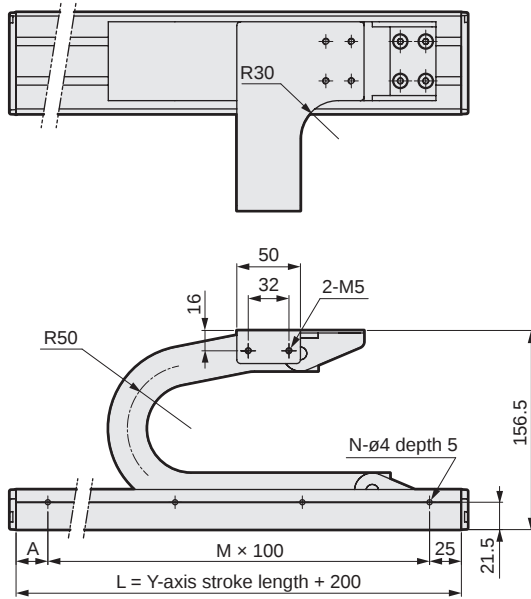
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
A1/A4	85	50	35

A: Basic length R: Bending radius S: Link pitch

Cableveyor dimensions

● ETS-210A-CABC23-Y



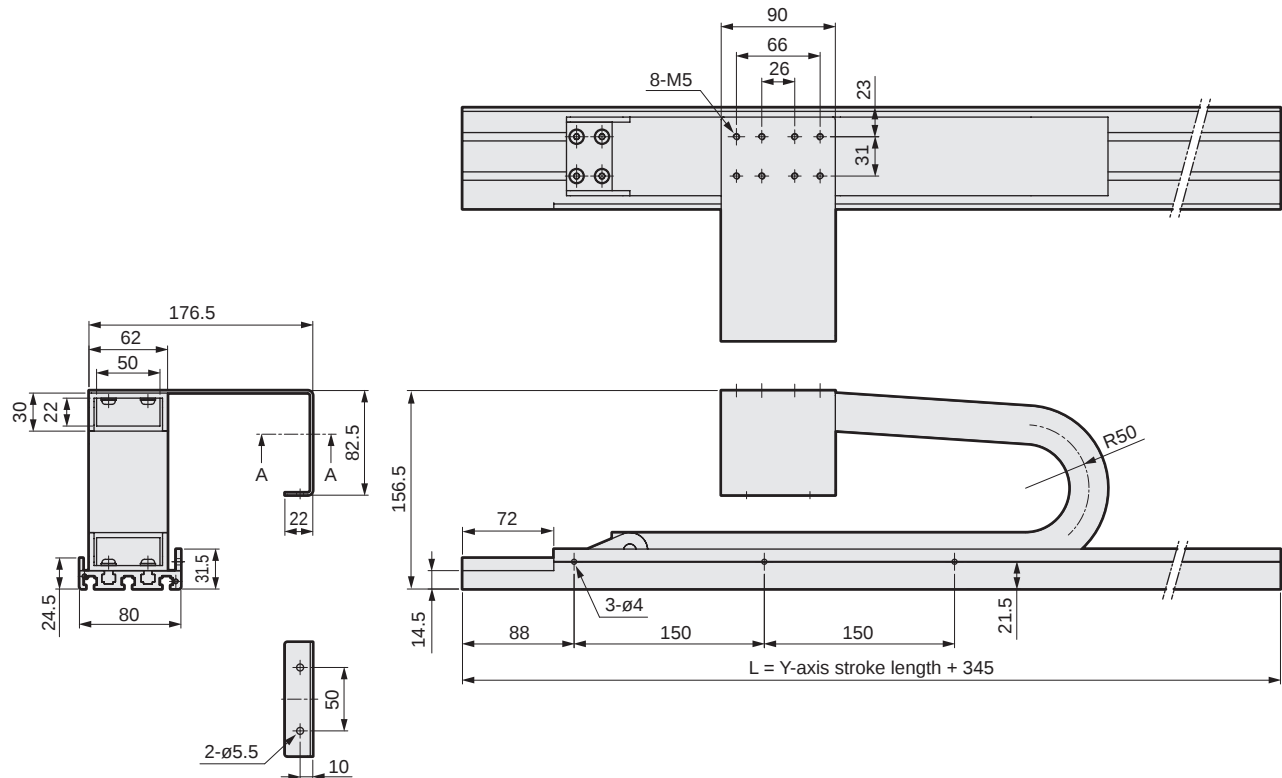
Y-axis stroke (mm)	50	100	150	200	250	300	350
L	250	300	350	400	450	500	550
A	25	75	25	75	25	75	25
M	2	2	3	3	4	4	5
N	3	3	4	4	5	5	6

No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
A1/A3	105	50	35

A: Basic length R: Bending radius S: Link pitch

● ETS-430A-CABC14-Y



A-A cross section

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
L	395	445	495	545	595	645	695	745	795	845	895

No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
A1/A4	226	50	35

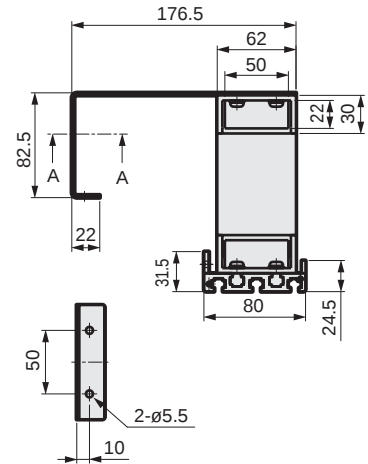
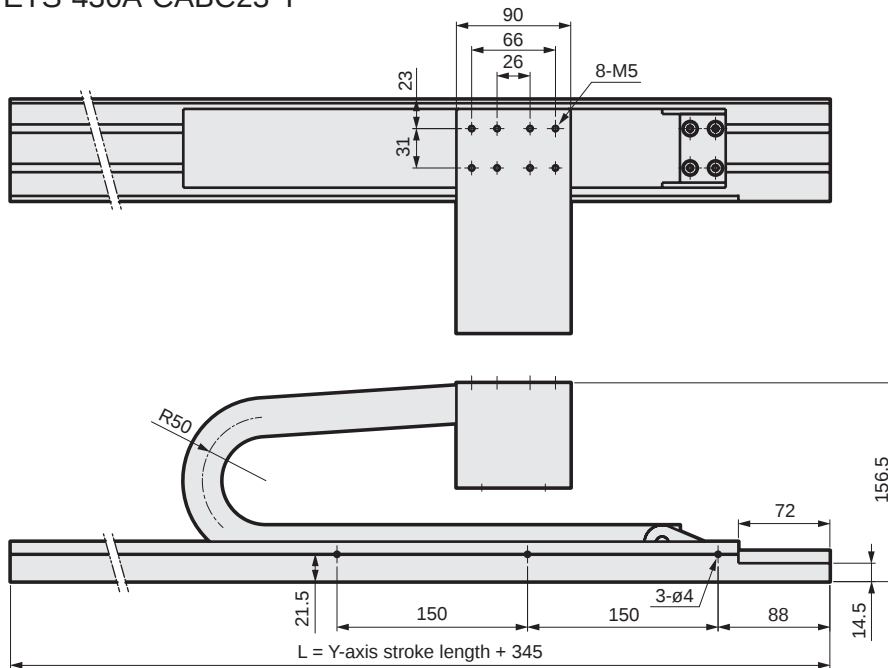
A: Basic length R: Bending radius S: Link pitch

Discontinued some variations

ETS Multi-Axis Series

Cableveyor dimensions

● ETS-430A-CABC23-Y



A-A cross section

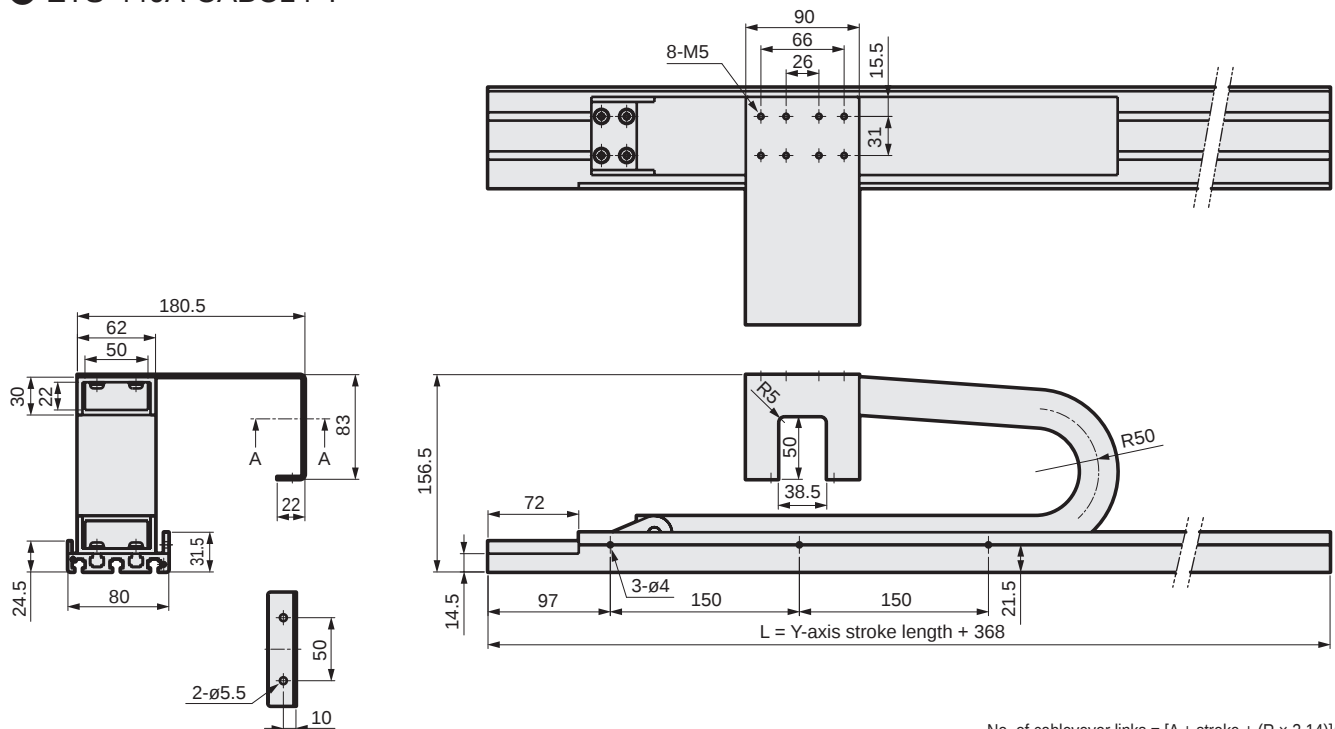
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
A2/A3	226	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
L	395	445	495	545	595	645	695	745	795	845	895

● ETS-440A-CABC14-Y



A-A cross section

No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

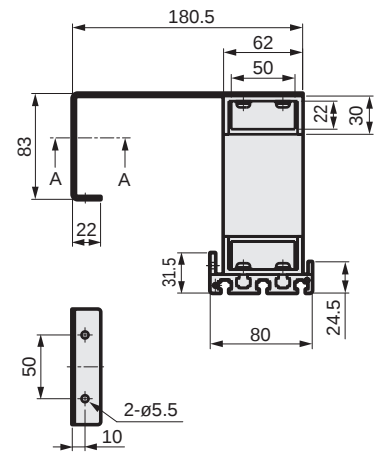
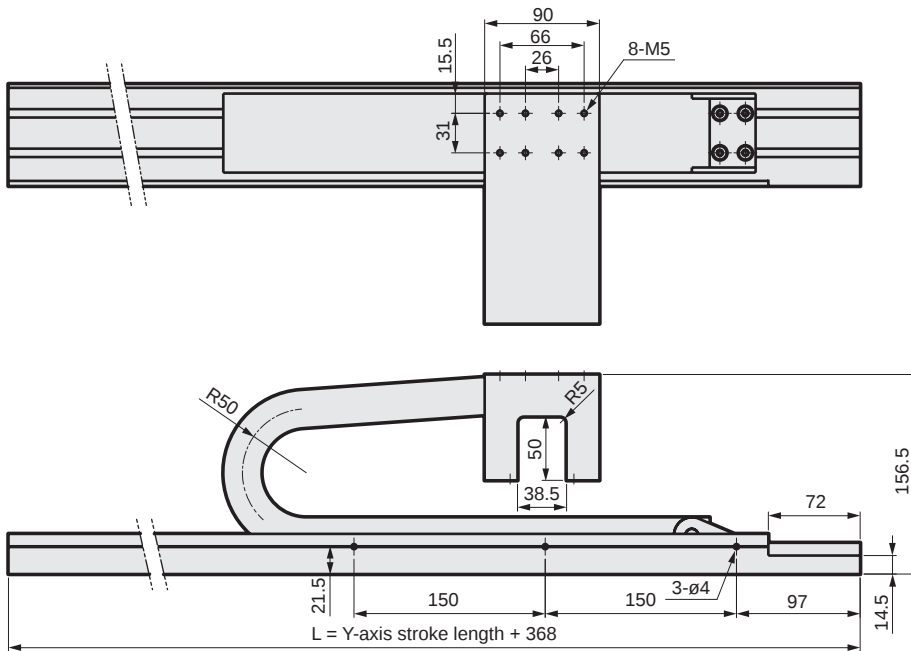
Y Cableveyor			
Connection direction	A	R	S
A1/A4	207	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
L	418	468	518	568	618	668	718	768	818	868	918

Cableveyor dimensions

● ETS-440A-CABC23-Y



A-A cross section

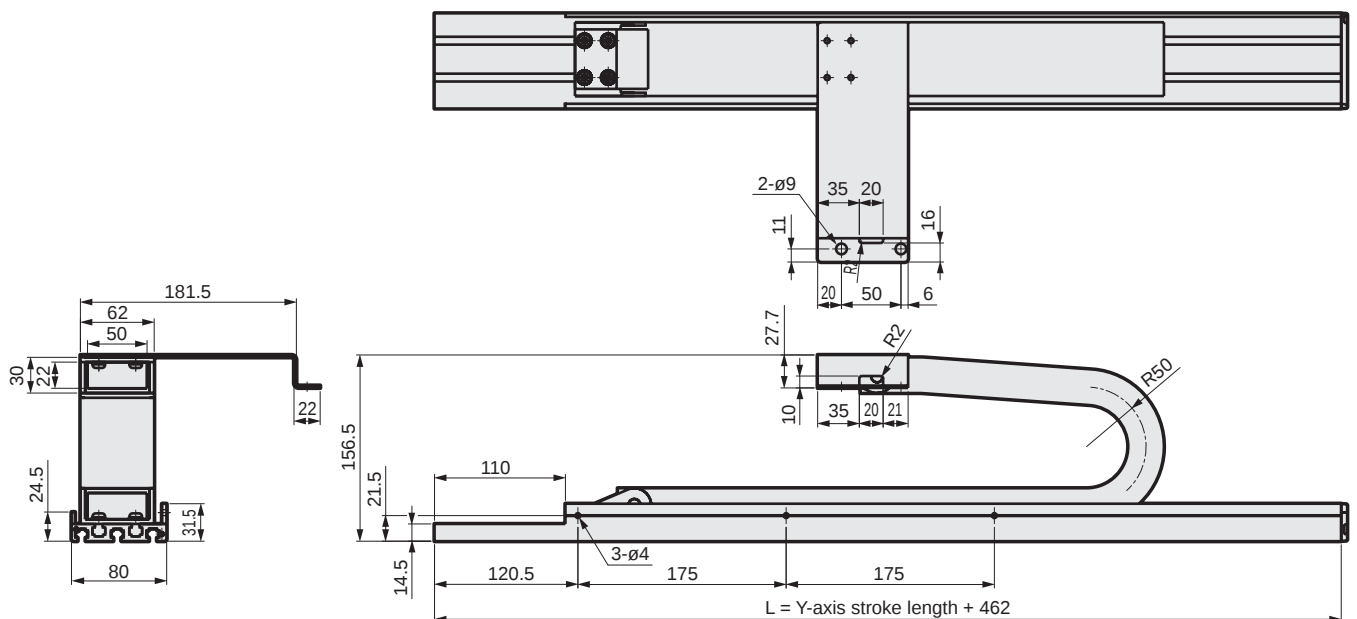
$$\text{No. of cableveyor links} = [A + \text{stroke} + (R \times 3.14)]/S$$

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
L	418	468	518	568	618	668	718	768	818	868	918

Y Cableveyor			
Connection direction	A	R	S
A2/A3	207	50	35

A: Basic length R: Bending radius S: Link pitch

● ETS-650A-CABC14-Y


$$\text{No. of cableveyor links} = [A + \text{stroke} + (R \times 3.14)]/S$$

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

Y Cableveyor			
Connection direction	A	R	S
A1/A4	284	50	35

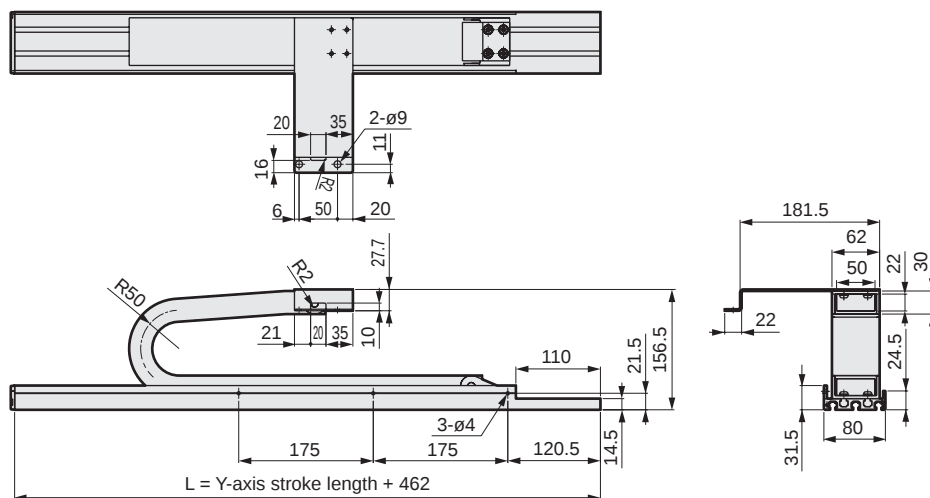
A: Basic length R: Bending radius S: Link pitch

Discontinued some variations

ETS Multi-Axis Series

Cableveyor dimensions

● ETS-650A-CABC23-Y



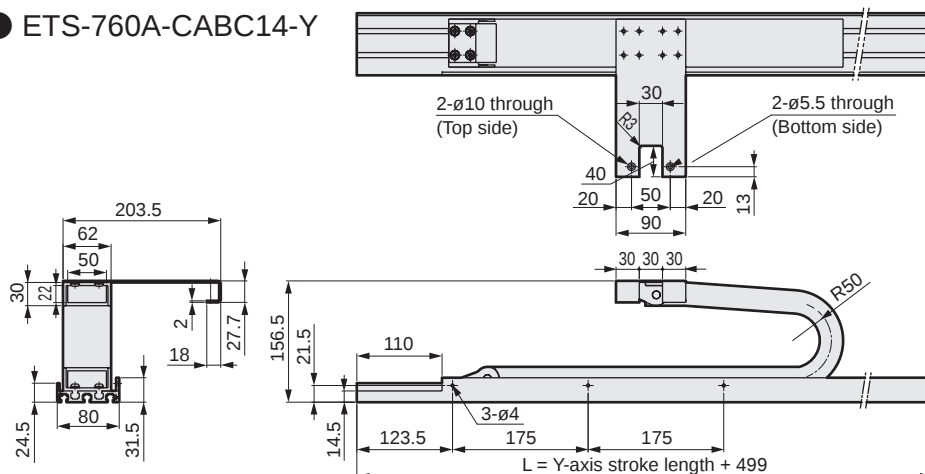
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
A2/A3	284	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

● ETS-760A-CABC14-Y



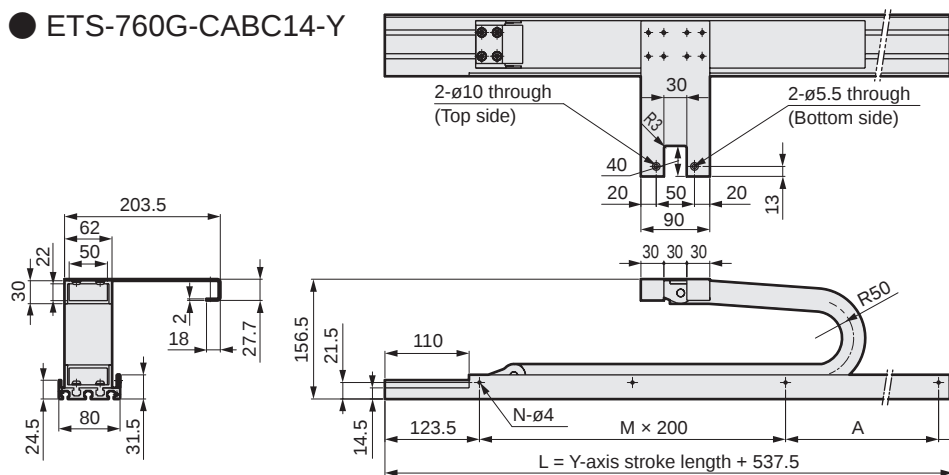
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
A1/A4	298	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

● ETS-760G-CABC14-Y



No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

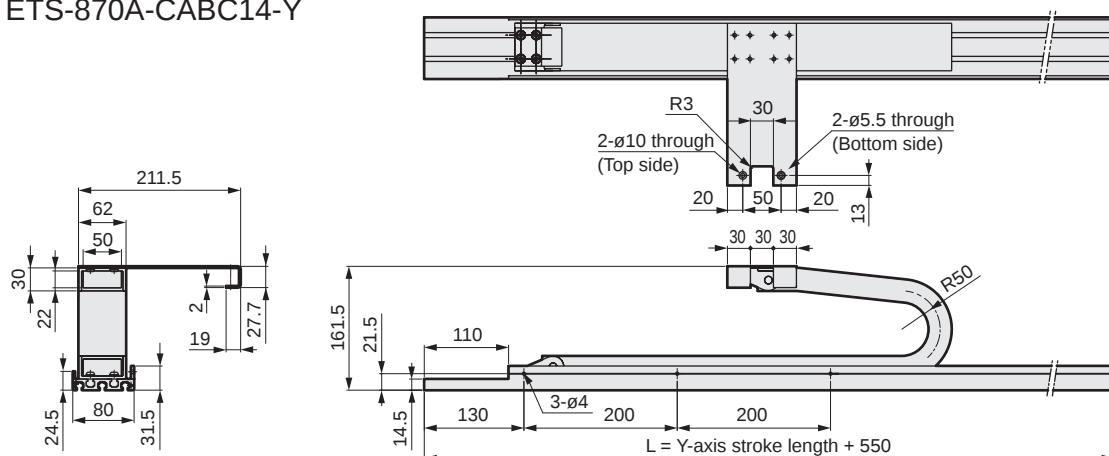
Y Cableveyor			
Connection direction	A	R	S
G1/G4	298	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	200	250	300	350	400	450	500	550	600	650	700	750	800	850
L	737.5	787.5	837.5	887.5	937.5	987.5	1037.5	1087.5	1137.5	1187.5	1237.5	1287.5	1337.5	1387.5
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	2	3	3	3	3	4	4	4	4	5	5	5	5	6
N	4	5	5	5	5	6	6	6	6	7	7	7	7	8

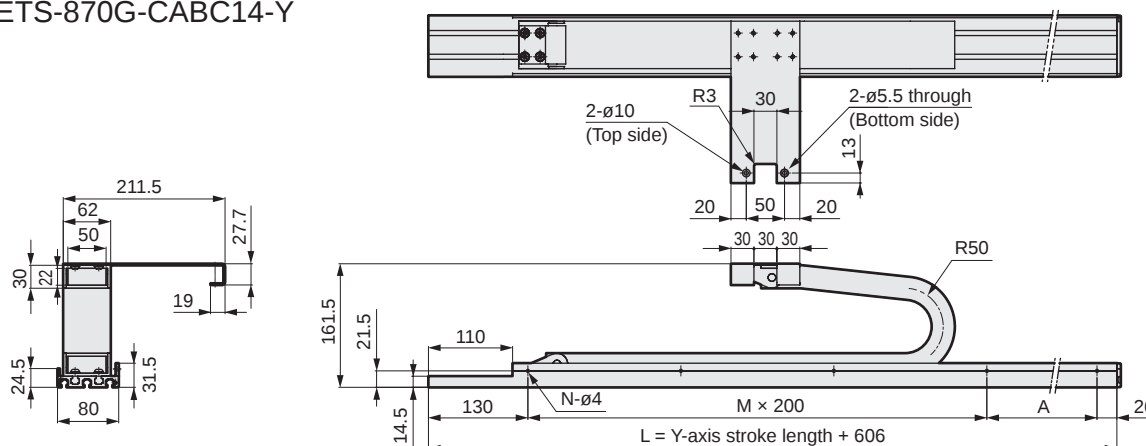
Cableveyor dimensions

● ETS-870A-CABC14-Y



Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
L	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300

● ETS-870G-CABC14-Y



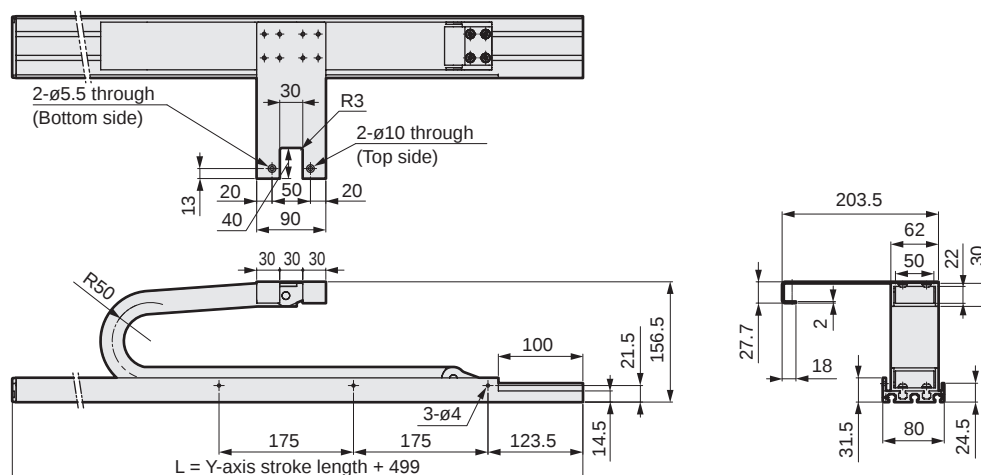
Y-axis stroke (mm)	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	806	856	906	956	1006	1056	1106	1156	1206	1256	1306	1356	1406	1456	1506	1556	1606	1656
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7
N	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9

No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
A1/A4/G1/G4	359	50	35

A: Basic length R: Bending radius S: Link pitch

● ETS-760A-CABC23-Y



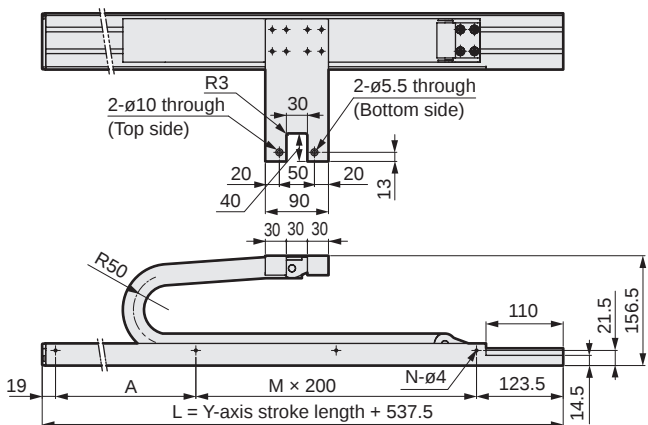
Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

Discontinued some variations

ETS Multi-Axis Series

Cableveyor dimensions

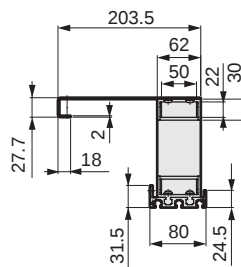
● ETS-760G-CABC23-Y



No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

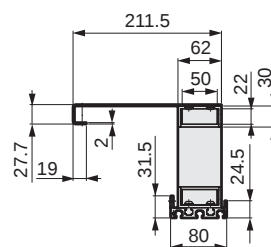
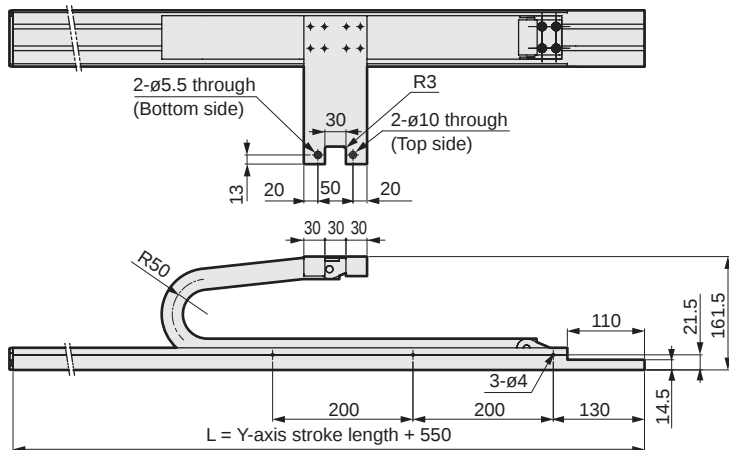
Y Cableveyor			
Connection direction	A	R	S
A1/A4/G1/G4	298	50	35

A: Basic length R: Bending radius S: Link pitch



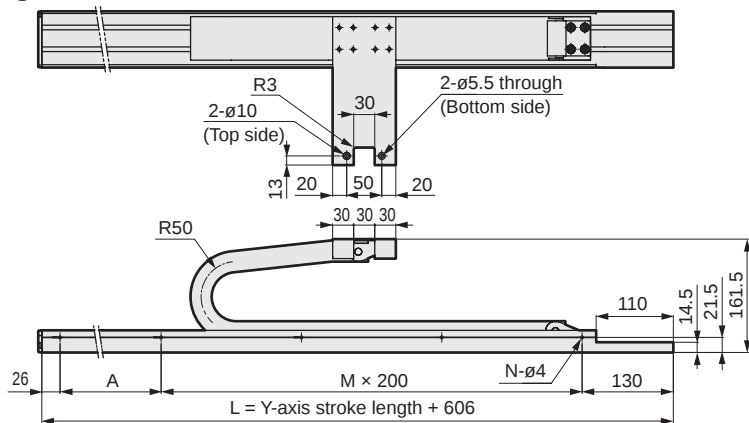
Y-axis stroke (mm)	200	250	300	350	400	450	500	550	600	650	700	750	800	850
L	737.5	787.5	837.5	887.5	937.5	987.5	1037.5	1087.5	1137.5	1187.5	1237.5	1287.5	1337.5	1387.5
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	2	3	3	3	3	4	4	4	4	5	5	5	5	6
N	4	5	5	5	5	6	6	6	6	7	7	7	7	8

● ETS-870A-CABC23-Y



Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
L	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300

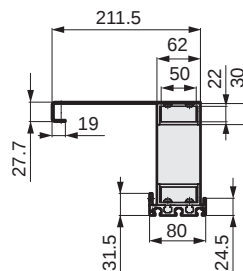
● ETS-870G-CABC23-Y



No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
A2/A3/G2/G3	359	50	35

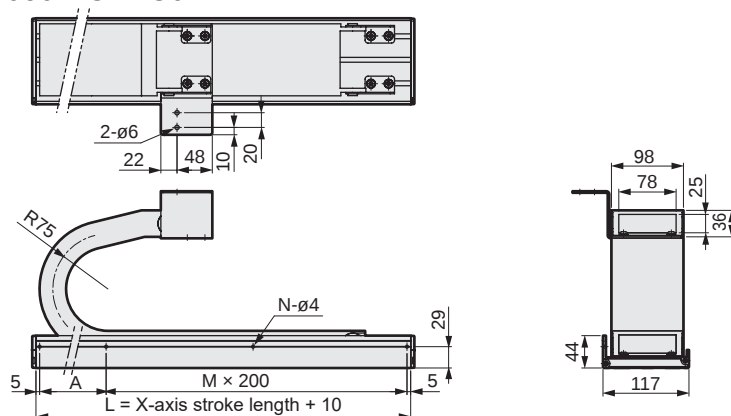
A: Basic length R: Bending radius S: Link pitch



Y-axis stroke (mm)	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	806	856	906	956	1006	1056	1106	1156	1206	1256	1306	1356	1406	1456	1506	1556	1606	1656
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7
N	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9

Cableveyor dimensions

● ETS-650P-CABC01-X

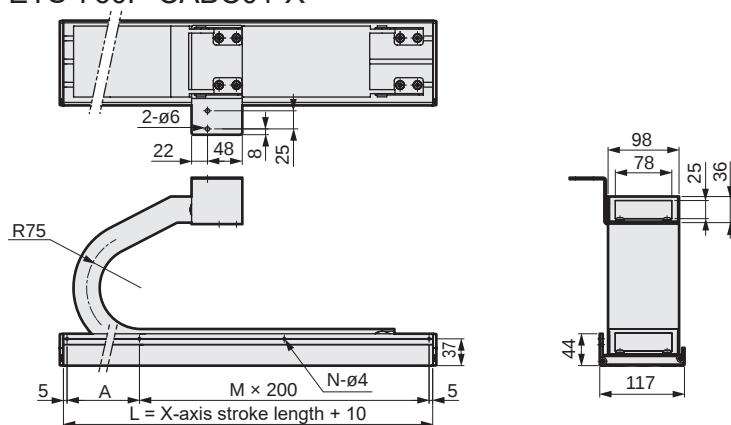
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
P1	202	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735	760	785
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7

● ETS-760P-CABC01-X

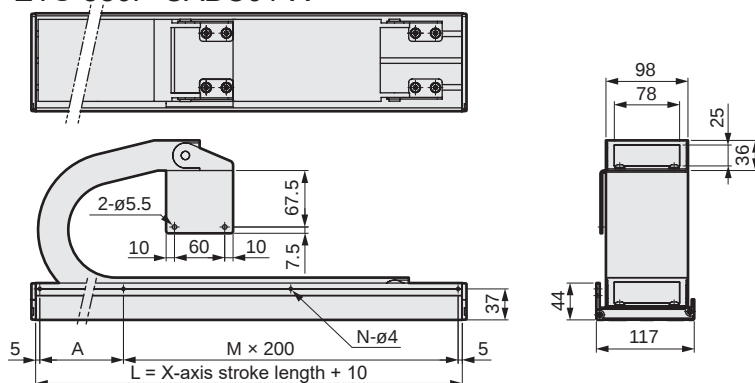
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
P1	209	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735	760	785	810	835	860	885
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8

● ETS-880P-CABC01-X

No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
P1	202	75	45

A: Basic length R: Bending radius S: Link pitch

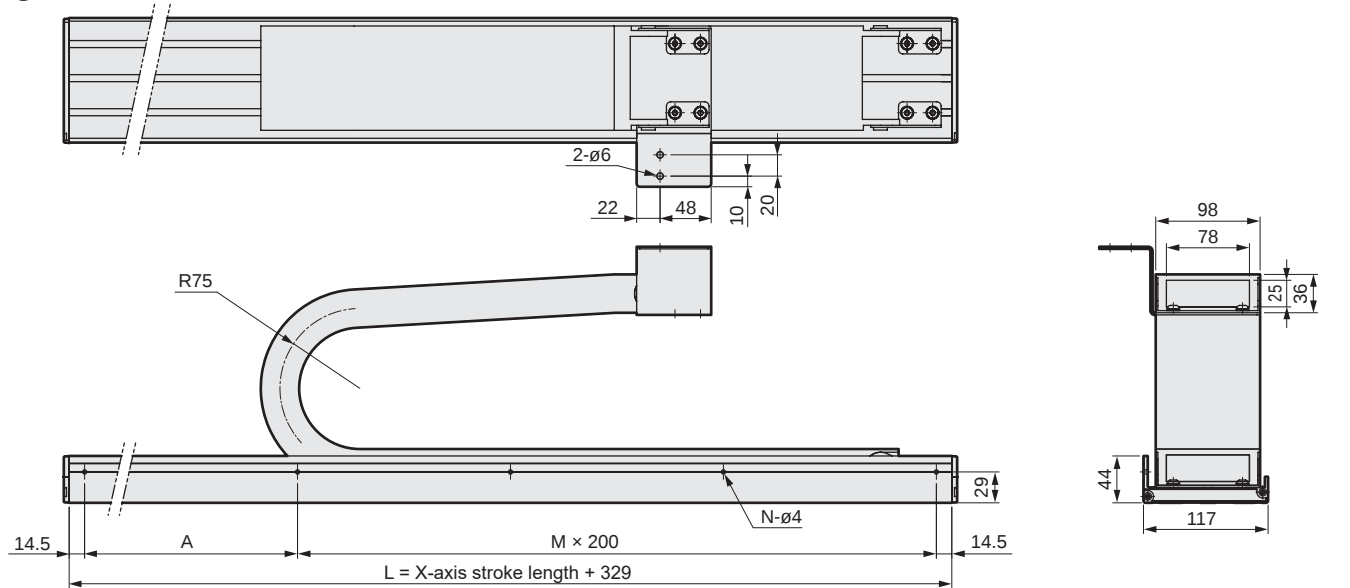
X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735	760	785	810	835	860	885	910	935	960	985	1010
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9

Discontinued some variations

ETS Multi-Axis Series

Cableveyor dimensions

● ETS-650P-CABC02-X



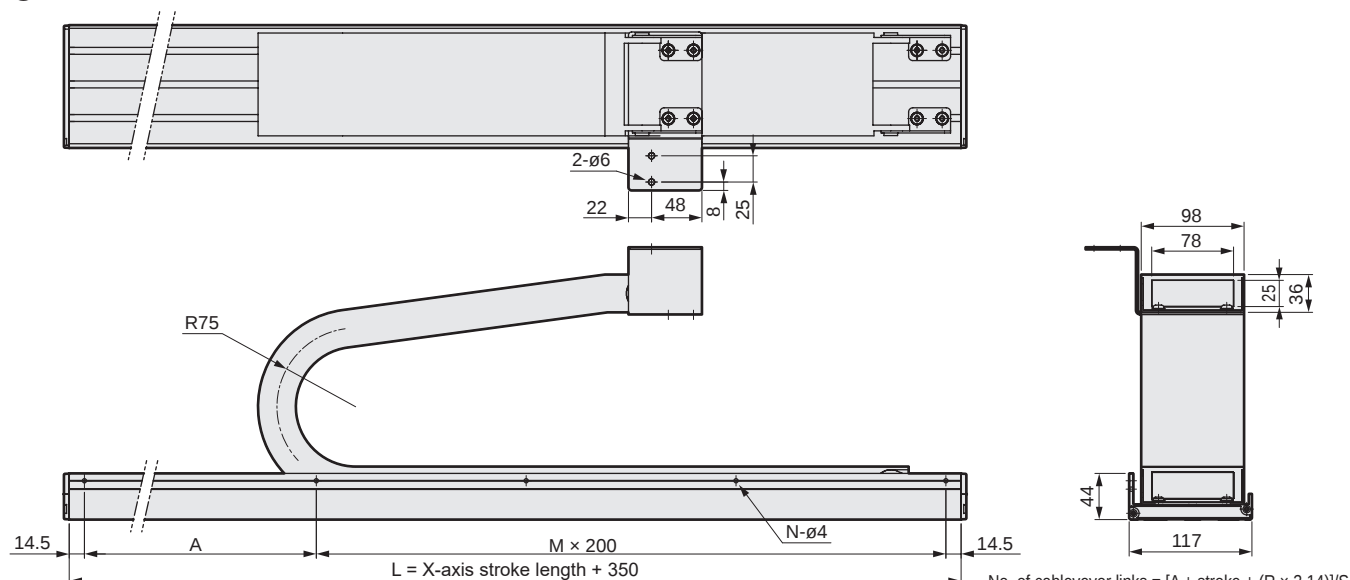
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
P2	296	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179	1229	1279	1329	1379
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

● ETS-760P-CABC02-X



No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

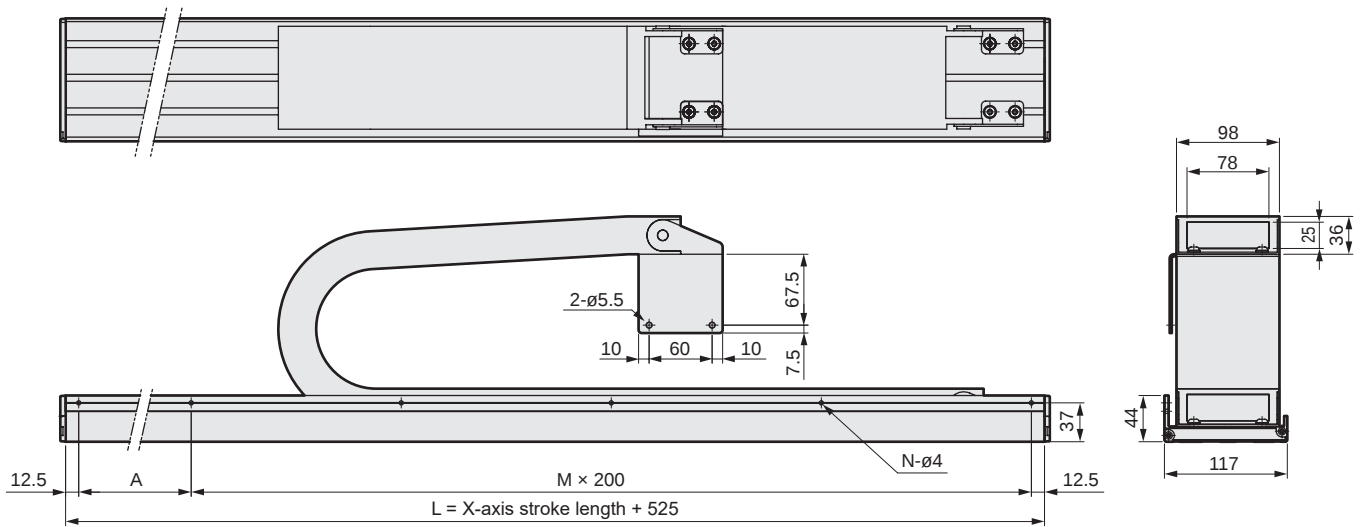
X Cableveyor			
Connection direction	A	R	S
P2	317	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9

Cableveyor dimensions

● ETS-880P-CABC02-X



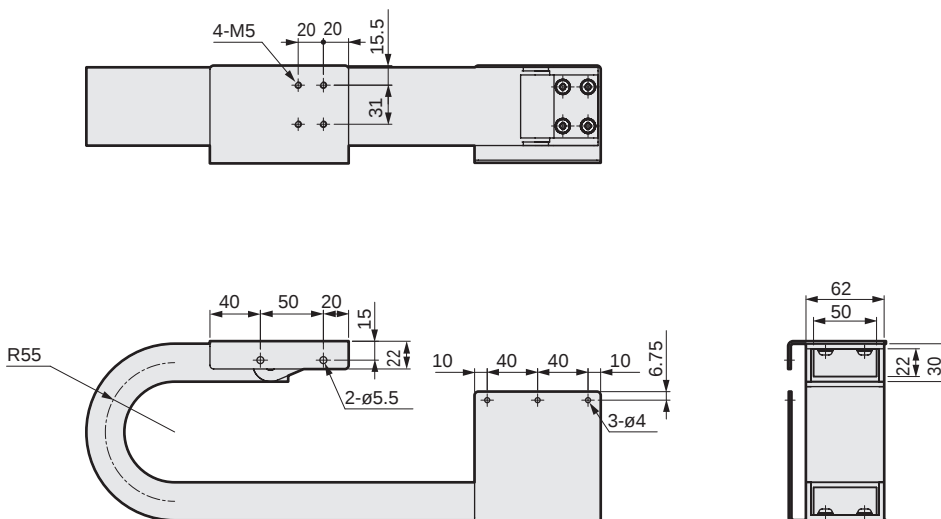
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

X Cableveyor			
Connection direction	A	R	S
P1/P2	368	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9
N	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11

● ETS-650P/760P-CABC00-Z



No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Z Cableveyor			
Connection direction	A	R	S
F1/F3	100	50	35

A: Basic length R: Bending radius S: Link pitch

Servo motor compatible

Stepper motor compatible

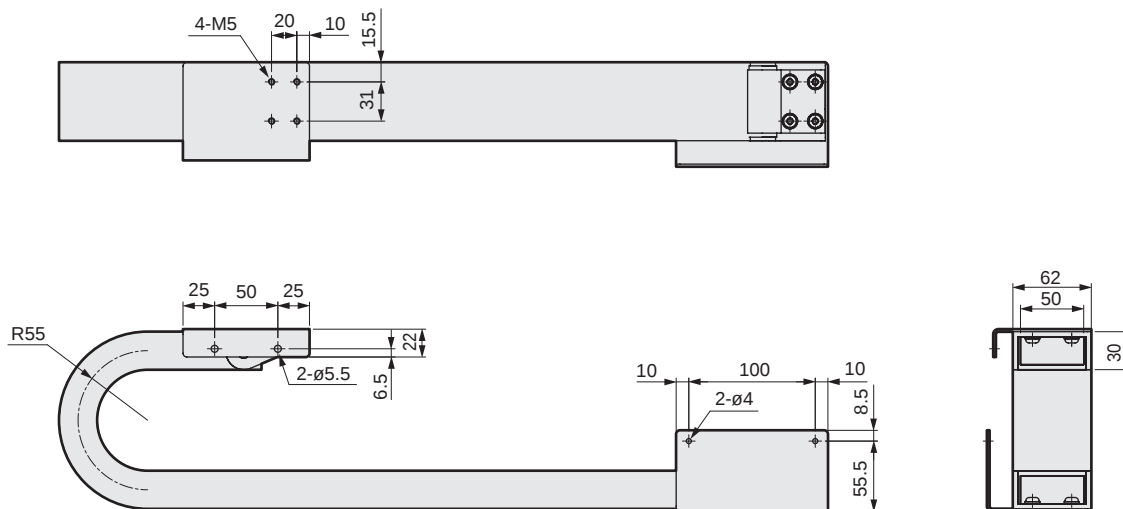
Safety precautions

Discontinued some variations

ETS Multi-Axis Series

Cableveyor dimensions

● ETS-880P-CABC00-Z

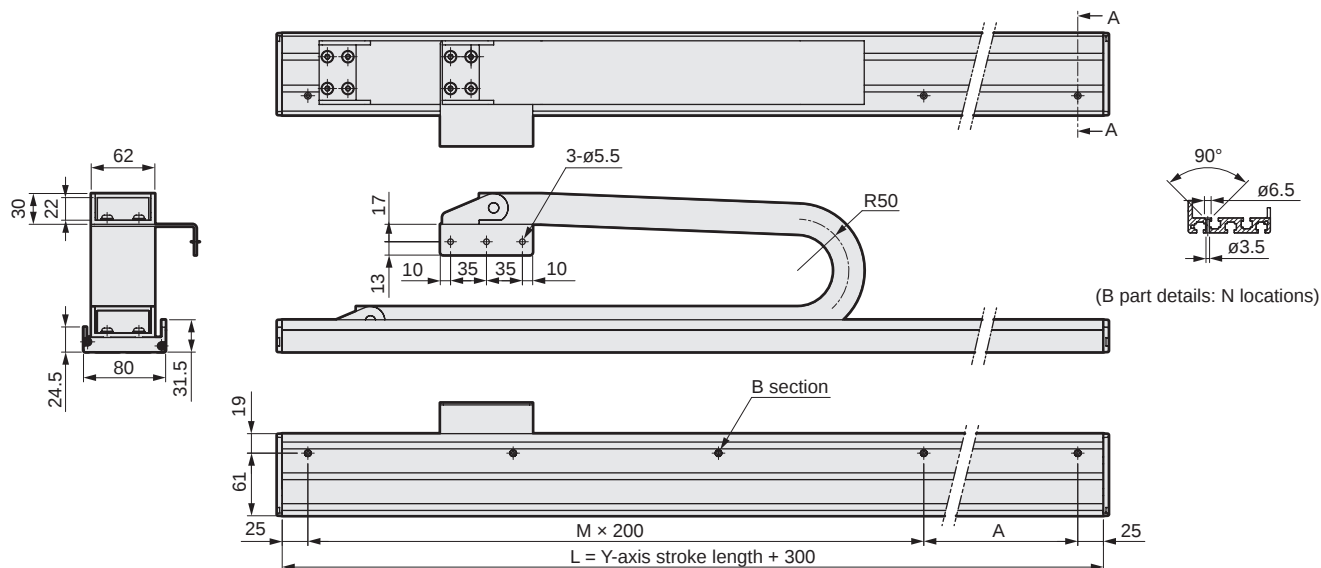


No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Z Cableveyor			
Connection direction	A	R	S
P1/P2	250	50	35

A: Basic length R: Bending radius S: Link pitch

● ETS-530F-CABC00-Y



No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
F1/F3	240	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
N	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8

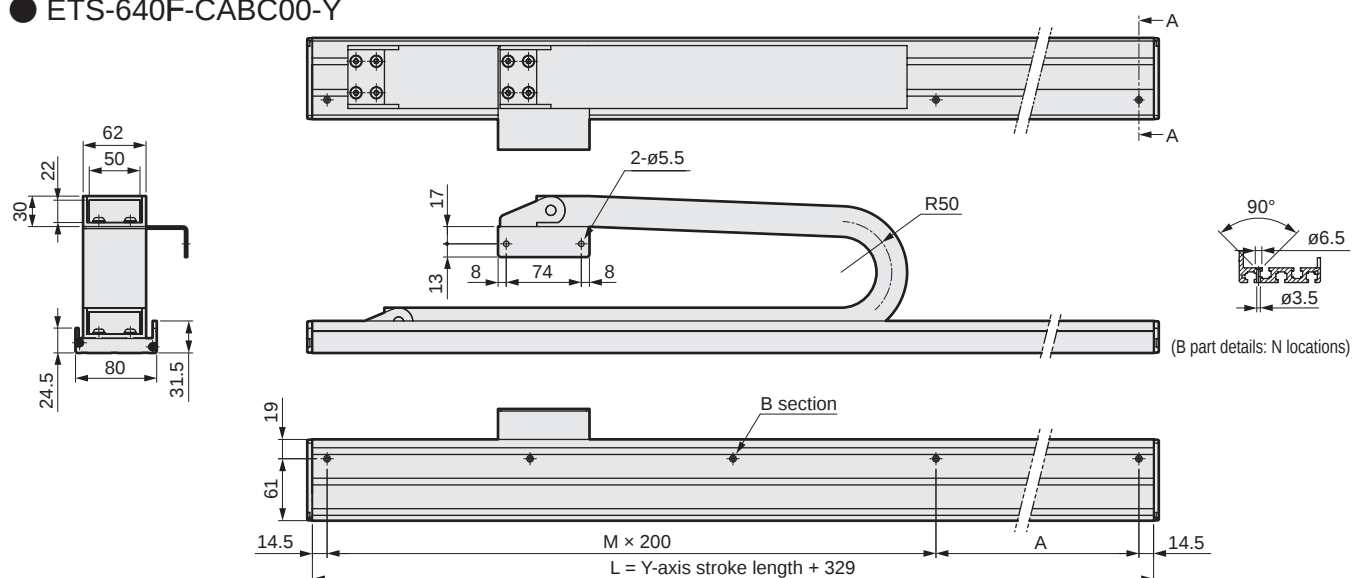
Discontinued some variations

ETS Multi-Axis Series

Combination parts: Cableveyor assembly

Cableveyor dimensions

● ETS-640F-CABC00-Y



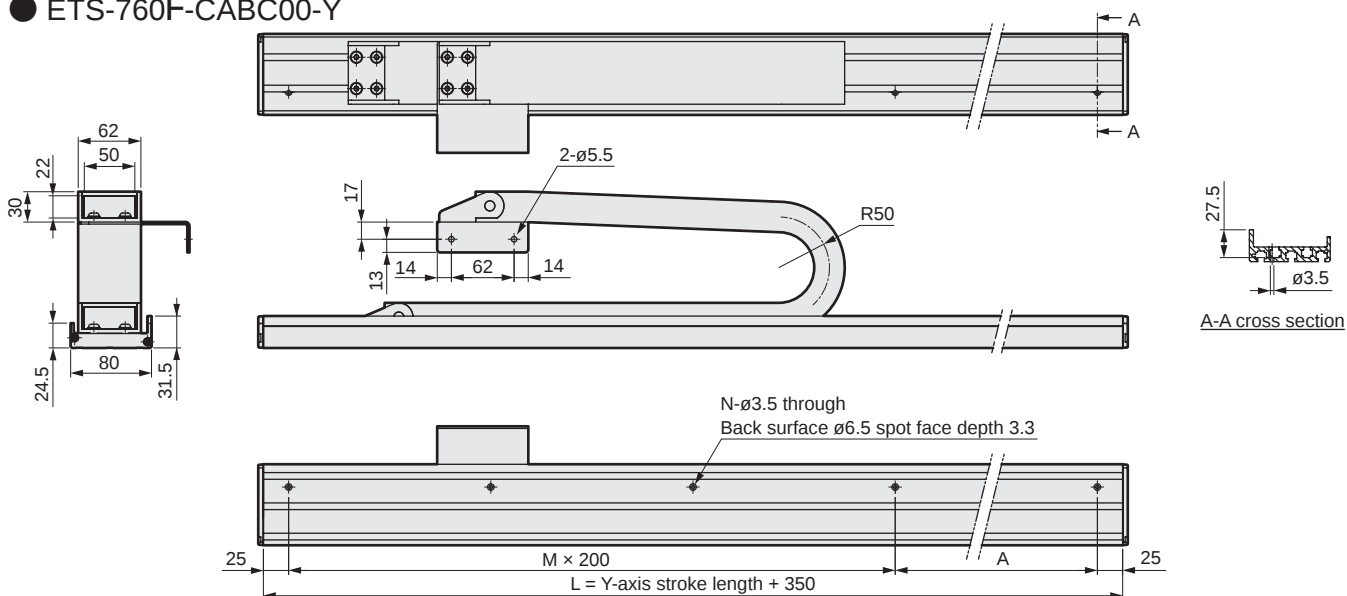
No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
F1/F3	250	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179	1229	1279	1329	1379
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

● ETS-760F-CABC00-Y



No. of cableveyor links = $[A + \text{stroke} + (R \times 3.14)]/S$

Y Cableveyor			
Connection direction	A	R	S
F1/F3	190	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

Discontinued some variations

Electric actuator Ball screw drive Slider

ETS Multi-Axis Series

Combination parts: Axis combination bracket

Sales of ETS-210A, 430A, 440A, 530F, 640F,
ETS-760G, 870G discontinued.

RoHS

How to order

ETS - 210 A - BKTC 14 - Y 030

A Combined axes	
210	ETS-06 × ETS-05
430	ETS-12 × ETS-10
440	ETS-12 × ETS-12
530	ETS-13 × ETS-10
640	ETS-14 × ETS-12
650	ETS-14 × ETS-13
760	ETS-17 × ETS-14
870	ETS-22 × ETS-17
880	ETS-22 × ETS-22

D Axes related to part specifications	
Y	Y-axis
Z	Z-axis

E D Axis stroke	
000 to 150	0 mm (In 50 mm increments) 1500 mm

C Combination direction	
00	Parts without combination direction restrictions
13	Combination directions 1/3 dedicated parts
14	Combination directions 1/4 dedicated parts
23	Combination directions 2/3 dedicated parts

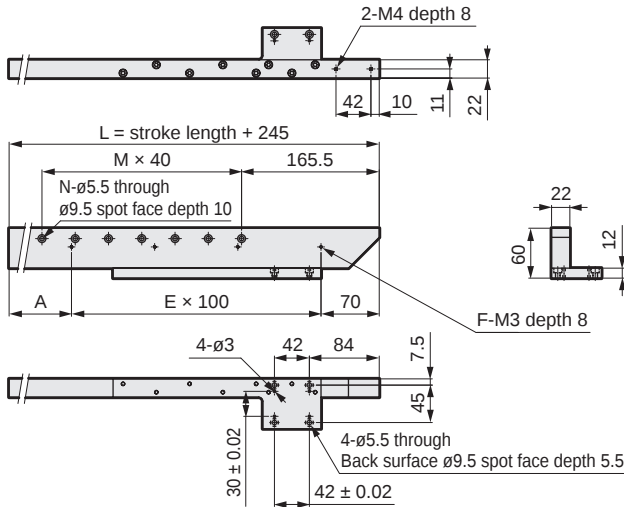
B Combination	
A	X-Y axes
G	X-Y axes with support guide
P	X-Z axes
F	Y-Z axes

Combination table

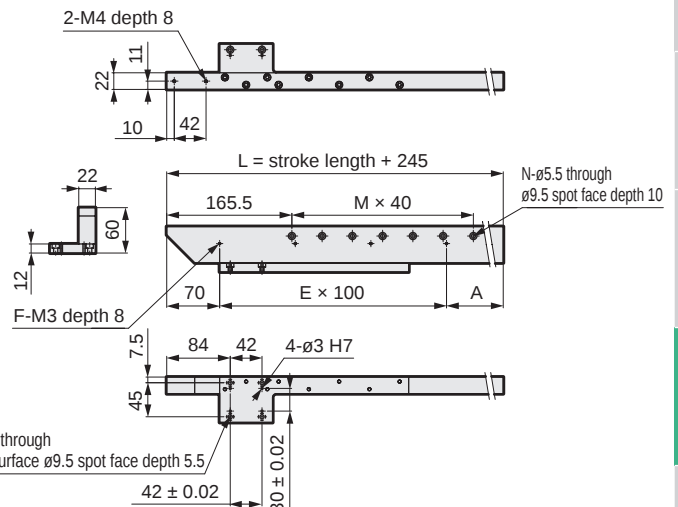
A Combined axes	B Combination	C Combination direction (restrictions)	D Axes related to part specifications	E D Axis stroke
ETS-210	A	14	Y	50 to 350
ETS-430	A	14	Y	000
ETS-440	A	14	Y	000
ETS-650	A	14	Y	000
ETS-760	A	14	Y	000
ETS-870	A	14	Y	000
ETS-760	G	14	Y	200 to 850
ETS-870	G	14	Y	200 to 1050
ETS-650	P	00	Z	000
ETS-760	P	00	Z	000
ETS-880	P	00	Z	000
ETS-530	F	00	Z	000
ETS-640	F	00	Z	000
ETS-760	F	00	Z	000

Bracket dimensions

● ETS-210A-BKTC14-Y***

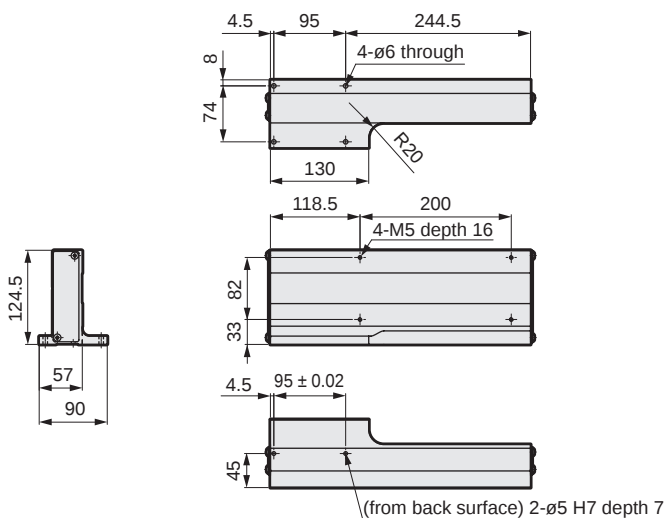


● ETS-210A-BKTC23-Y***

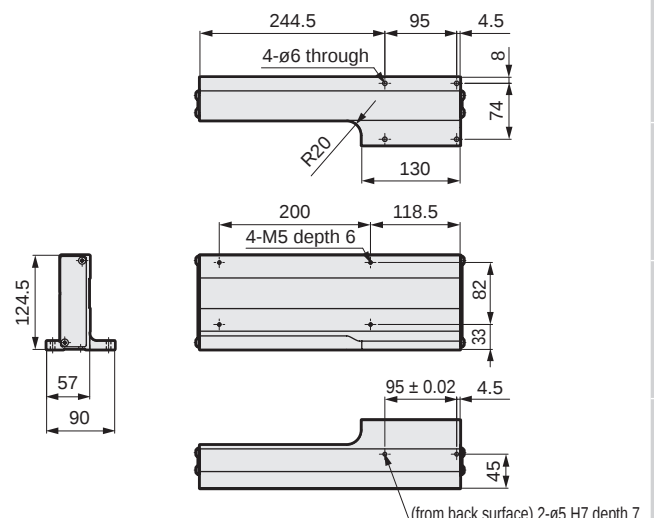


Stroke (mm)	50	100	150	200	250	300	350
L	295	345	395	445	495	545	595
A	25	75	25	75	25	75	25
M	2	4	5	6	7	9	10
N	3	5	6	7	9	10	11
E	2	2	3	3	4	4	5
F	3	3	4	4	5	5	6

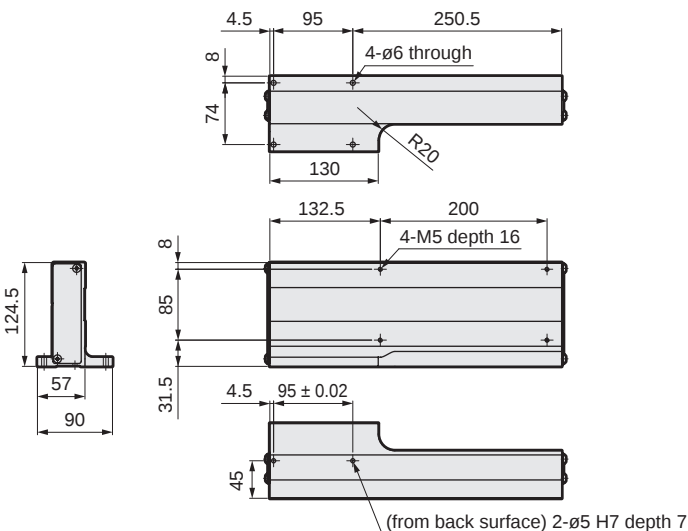
● ETS-430A-BKTC14-Y000



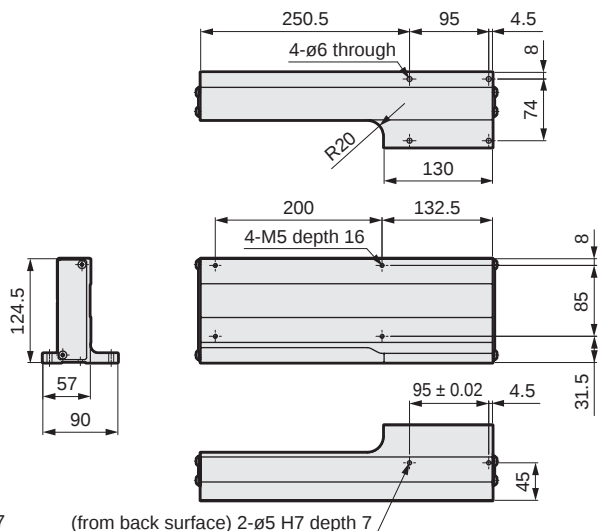
● ETS-430A-BKTC23-Y000



● ETS-440A-BKTC14-Y000



● ETS-440A-BKTC23-Y000

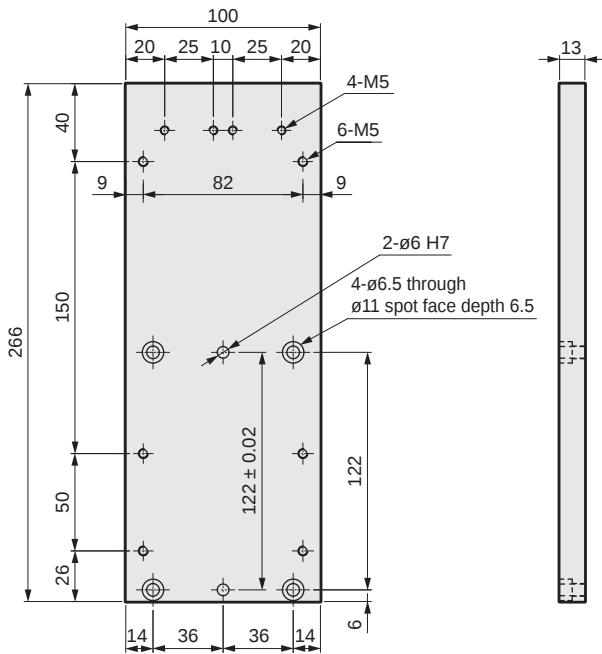


Discontinued some variations

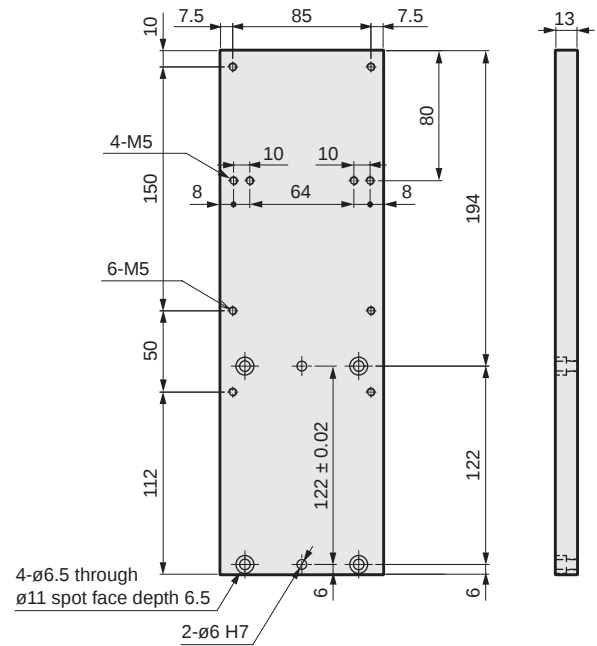
ETS Multi-Axis Series

Bracket dimensions

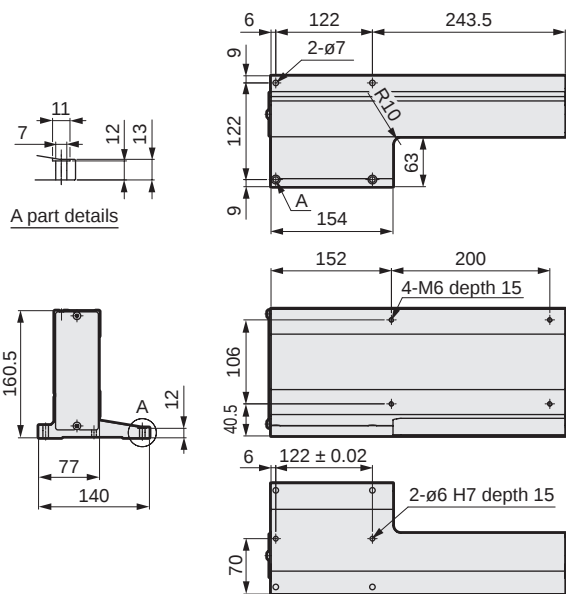
● ETS-530F-BKTC00-Z000



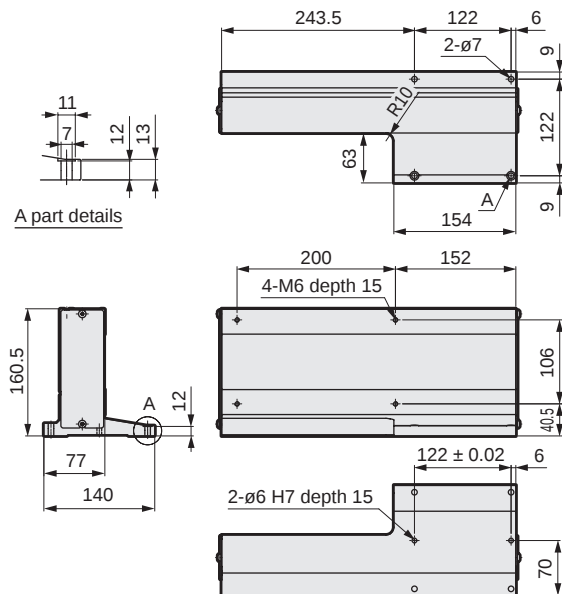
● ETS-640F-BKTC00-Z000



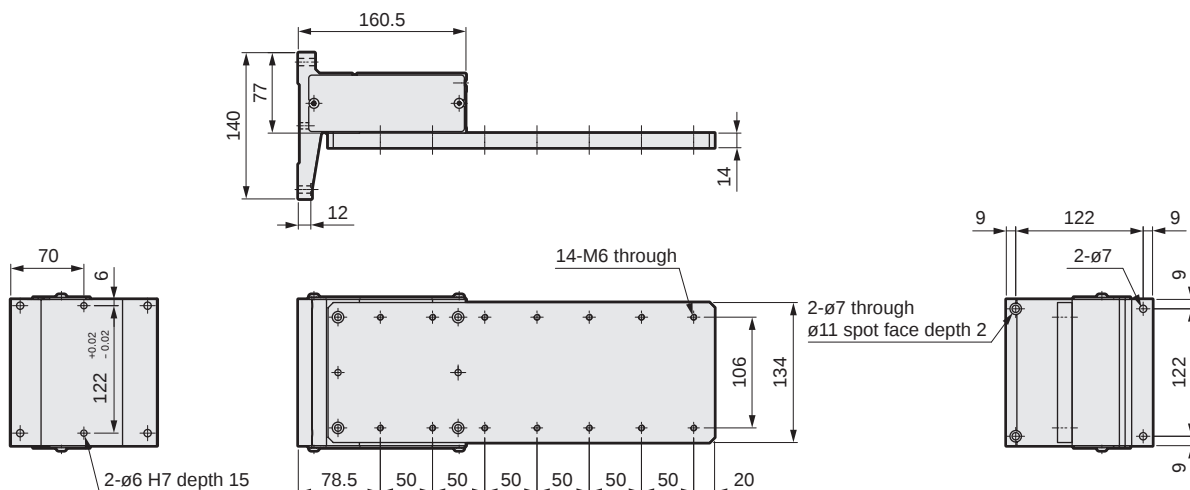
● ETS-650A-BKTC14-Y000



● ETS-650A-BKTC23-Y000



● ETS-650P-BKTC00-Z000



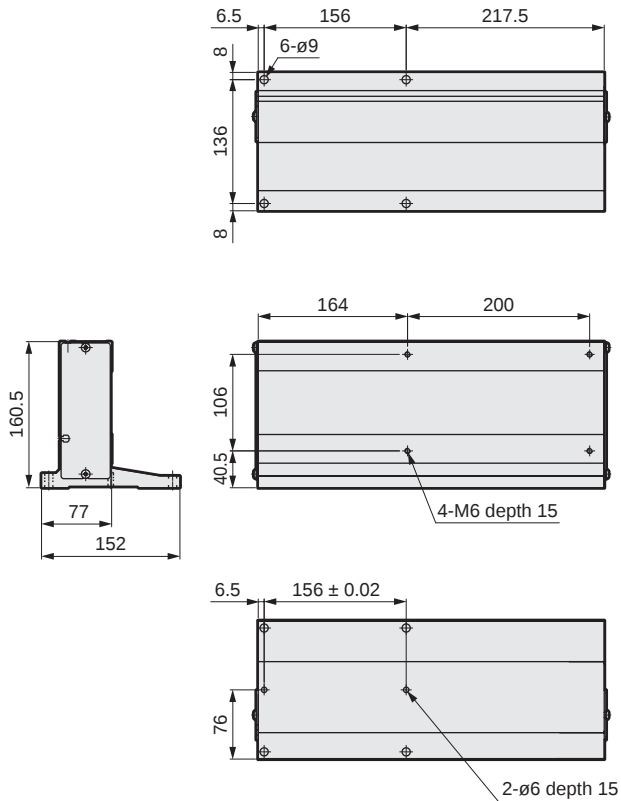
Discontinued some variations

ETS Multi-Axis Series

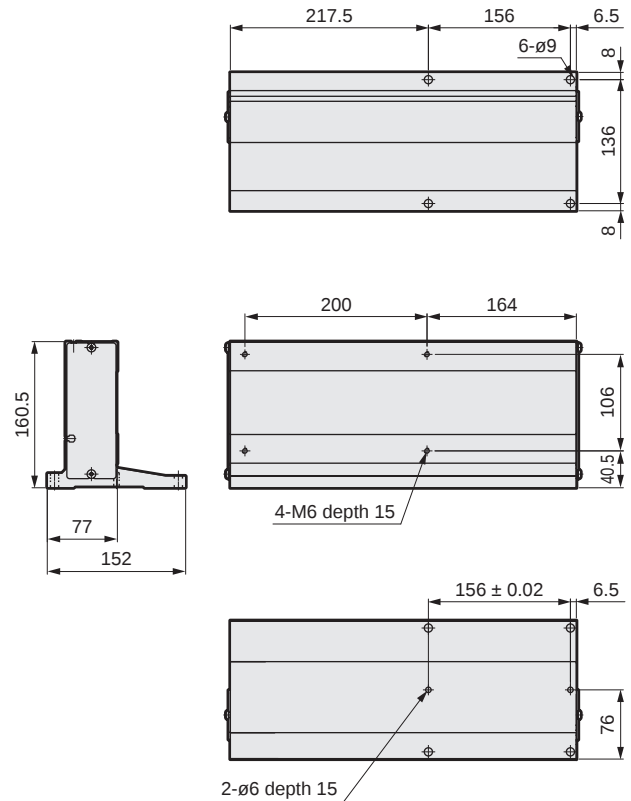
Combination parts: Bracket

Bracket dimensions

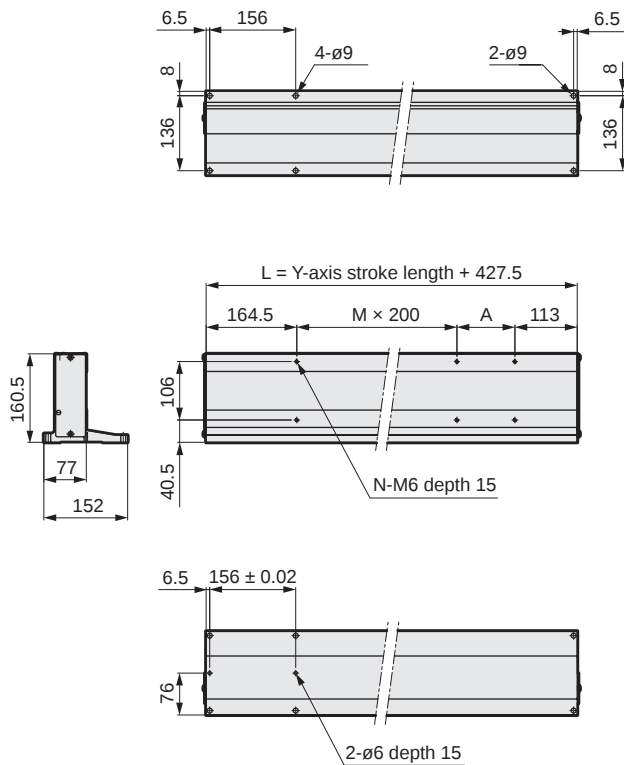
● ETS-760A-BKTC14-Y000



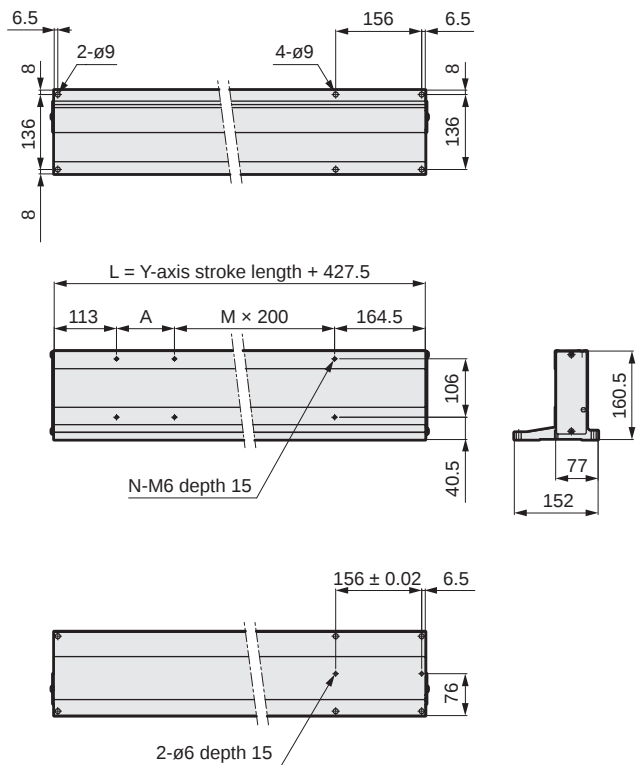
● ETS-760A-BKTC23-Y000



● ETS-760G-BKTC14-Y***



● ETS-760G-BKTC23-Y***



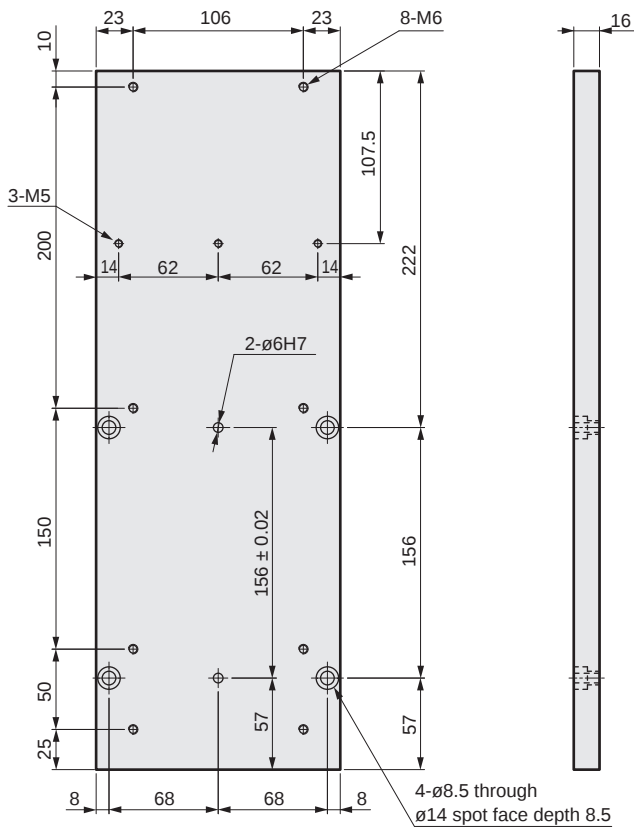
Stroke (mm)	200	250	300	350	400	450	500	550	600	650	700	750	800	850
L	627.5	677.5	727.5	777.5	827.5	877.5	927.5	977.5	1027.5	1077.5	1127.5	1177.5	1227.5	1277.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12

Discontinued some variations

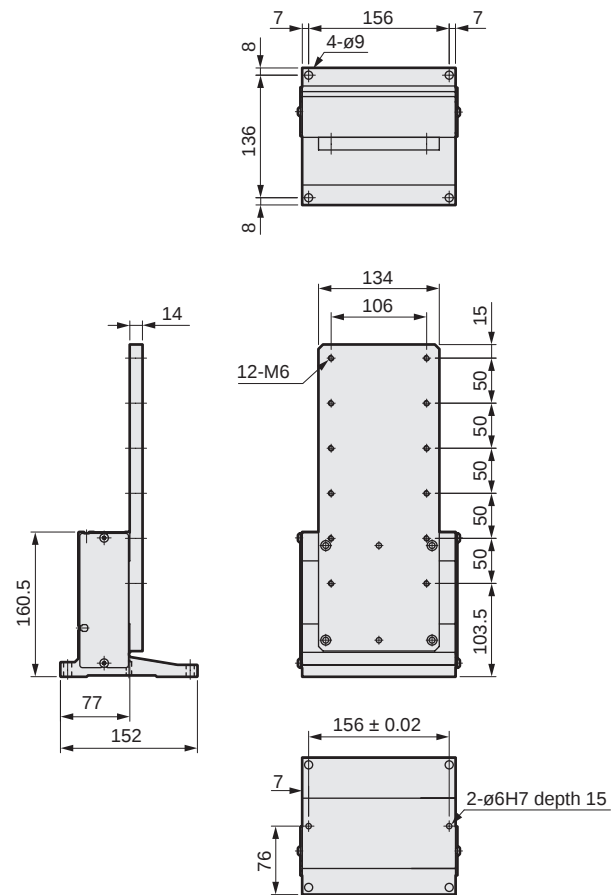
ETS Multi-Axis Series

Bracket dimensions

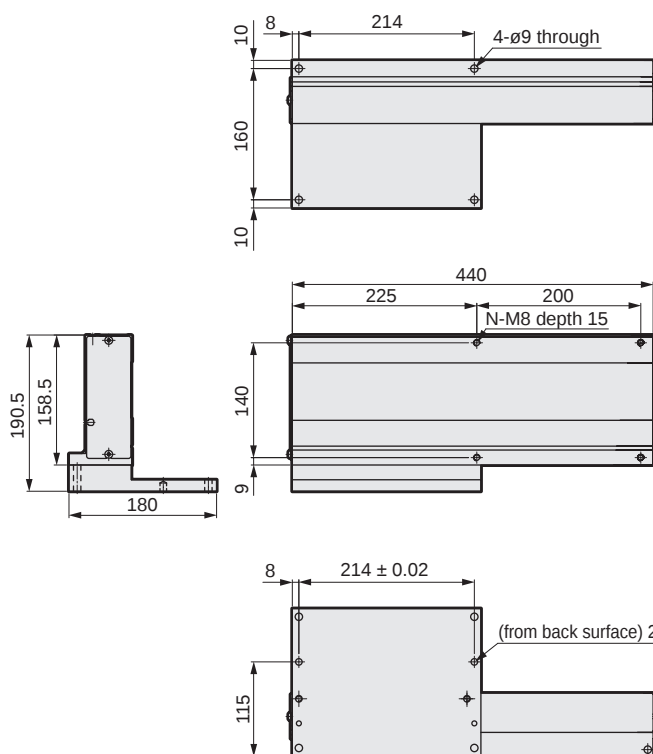
● ETS-760F-BKTC00-Z000



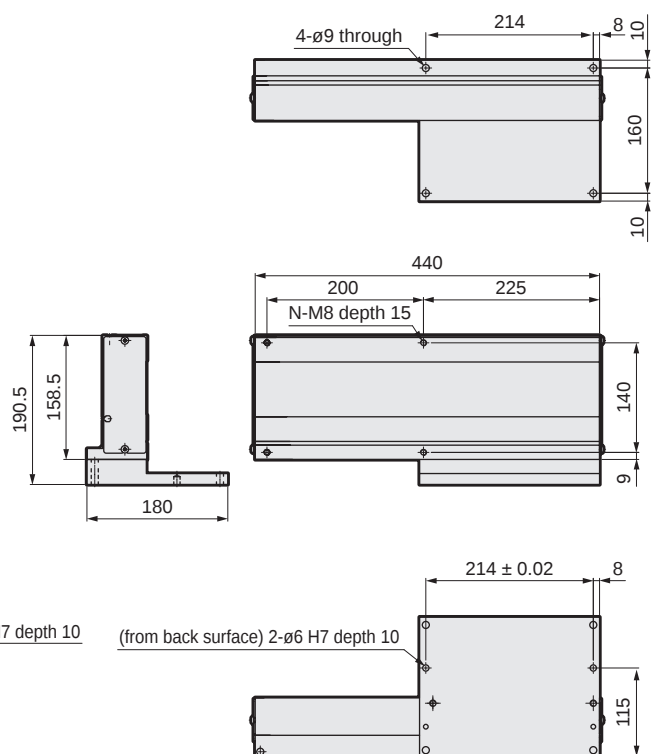
● ETS-760P-BKTC00-Z000



● ETS-870A-BKTC14-Y000



● ETS-870A-BKTC23-Y000



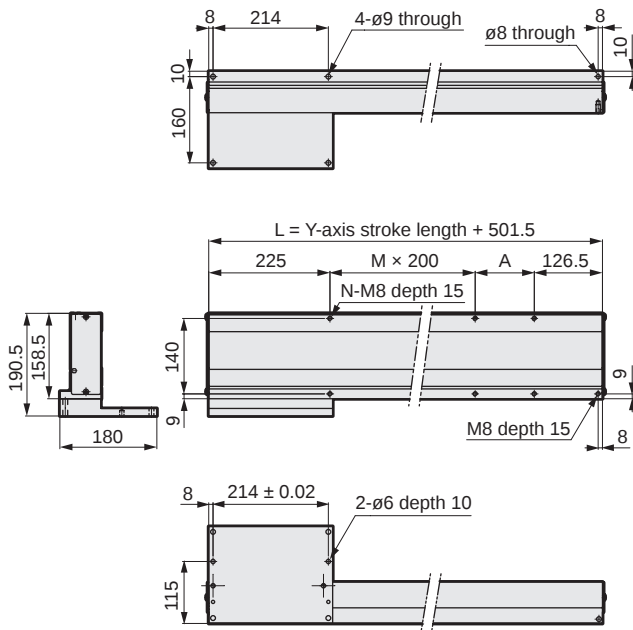
Discontinued some variations

ETS Multi-Axis Series

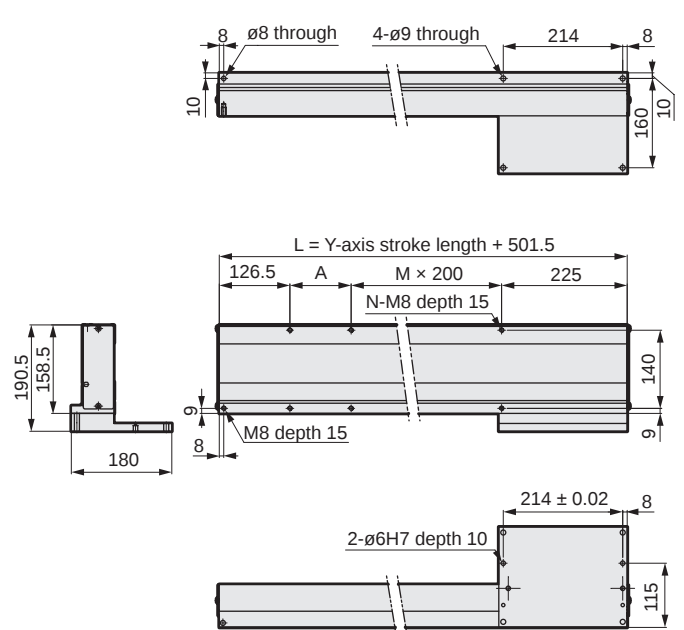
Combination parts: Bracket

Bracket dimensions

● ETS-870G-BKTC14-Y000

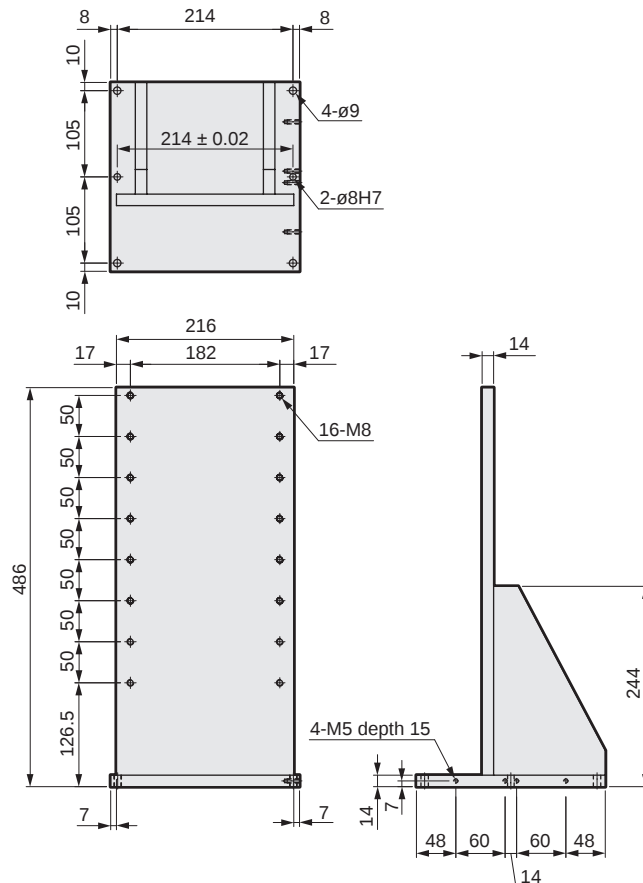


● ETS-870G-BKTC23-Y000



Stroke (mm)	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	701.5	751.5	801.5	851.5	901.5	951.5	1001.5	1051.5	1101.5	1151.5	1201.5	1251.5	1301.5	1351.5	1401.5	1451.5	1501.5	1551.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14

● ETS-880P-BKTC00-Z000



EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

EBR

ETS

ECS

Servo motor compatible

Stepper motor compatible

Safety precautions